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Leu Gly Val His Gly Ala Thr Leu Gly Val Gly Ser Leu Leu Ala
                425
Gly Phe Val Gly Glu Ser Thr Met Val Ala Ile Ala Ala Cys Tyr
                                    445
Val Tyr Arg Lys Gln Lys Lys Met Glu Asn Glu Ser Ala Thr
Glu Gly Glu Asp Ser Ala Met Thr Asp Met Pro Pro Thr Glu Glu
                470
                                    475
Val Thr Asp Ile Val Glu Met Arg Glu Glu Asn Glu
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<210> 8

<211> 535

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 33, 66, 96, 387

<223> unknown base

<400> 8

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<210> 9
<211> 434
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 32, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 228, 273,
      293, 296, 305, 336, 358, 361
<223> unknown base
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 gttttggaca cccaaagtgt ttgagaaaat tttgatagac atnatcggag 200
 tggantttgc ctttgcagaa ntttgngntg ttcctttgcg gattttctcc 250
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<211> 154
<212> DNA
<213> Homo sapiens
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<221> unsure
<222> 33, 49, 68, 83, 90, 98, 119
<223> unknown base
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 cgtcctcatc gccagcctng tggtcctacc ctacctgggg gtgcacggtg 150
 agac 154
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe
<400> 11
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<210> 12
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<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 12
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<210> 13
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 13
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<210> 14
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 14
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<210> 15
<211> 24
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 15
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<210> 16
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<211> 45
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<223> Synthetic oligonucleotide probe
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<210> 18
<211> 1901
<212> DNA
<213> Homo sapiens
<400> 18
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ccctatccag tatccctgaa cagaaatgca acccccattt gccaacccag 950

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a 1901
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<210> 19

<211> 457

<212> PRT

<213> Homo sapiens

<400> 19

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Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe 35 40 45

Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly 50 55 60

Val	Glu	Ser	Gln	Leu 65	Tyr	Lys	Leu	Pro	Trp 70	Val	Cys	Glu	Glu	Gly 75
Ala	Gly	Ile	Pro	Thr 80	Val	Leu	Gln	Gly	His 85	Ile	Asp	Суз	Gly	Ser 90
Leu	Leu	Gly	Tyr	Arg 95	Ala	Val	Tyr	Arg	Met 100	Cys	Phe	Ala	Thr	Ala 105
Ala	Phe	Phe	Phe	Phe 110	Phe	Phe	Thr	Leu	Leu 115	Met	Leu	Cys	Val	Ser 120
Ser	Ser	Arg	Asp	Pro 125	Arg	Ala	Ala	Ile	Gln 130	Asn	Gly	Phe	Trp	Phe 135
Phe	Lys	Phe	Leu	Ile 140	Leu	Val	Gly	Leu	Thr 145	Val	Gly	Ala	Phe	Tyr 150
Ile	Pro	Asp	Gly	Ser 155	Phe	Thr	Asn	Ile	Trp 160	Phe	Tyr	Phe	Gly	Val 165
Val	Gly	Ser	Phe	Leu 170	Phe	Ile	Leu	Ile	Gln 175	Leu	Val	Leu	Leu	Ile 180
Asp	Phe	Ala	His	Ser 185	Trp	Asn	Gln	Arg	Trp 190	Leu	Gly	Lys	Ala	Glu 195
Glu	Cys	Asp	Ser	Arg 200	Ala	Trp	Tyr	Ala	Gly 205	Leu	Phe	Phe	Phe	Thr 210
Leu	Leu	Phe	Tyr	Leu 215	Leu	Ser	Ile	Ala	Ala 220	Val	Ala	Leu	Met	Phe 225
Met	Tyr	Tyr	Thr	Glu 230	Pro	Ser	Gly	Cys	His 235	Glu	Gly	Lys	Val	Phe 240
Ile	Ser	Leu	Asn	Leu 245	Thr	Phe	Cys	Val	Cys 250	Val	Ser	Ile	Ala	Ala 255
Val	Leu	Pro	Lys	Val 260	Gln	Asp	Ala	Gln	Pro 265	Asn	Ser	Gly	Leu	Leu 270
Gln	Ala	Ser	Val	Ile 275	Thr	Leu	Tyr	Thr	Met 280	Phe	Val	Thr	Trp	Ser 285
Ala	Leu	Ser	Ser	Ile 290	Pro	Glu	Gln	Lys	Cys 295	Asn	Pro	His	Leu	Pro 300
Thr	Gln	Leu	Gly	Asn 305	Glu	Thr	Val	Val	Ala 310	Gly	Pro	Glu	Gly	Tyr 315
Glu	Thr	Gln	Trp	Trp 320	Asp	Ala	Pro	Ser	Ile 325	Val	Gly	Leu	Ile	Ile 330
Phe	Leu	Leu	Cys	Thr 335	Leu	Phe	Ile	Ser	Leu 340	Arg	Ser	Ser	Asp	His 345
Arg	Gln	Val	Asn	Ser	Leu	Met	Gln	Thr	Glu	Glu	Cys	Pro	Pro	Met

		350					355					360	
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Gly Arg A	Ala Phe	Asp 380	Asn	Glu	Gln	Asp	Gly 385	Val	Thr	Tyr	Ser	Tyr 390	
Ser Phe 1	Phe His	Phe 395	Cys	Leu	Val	Leu	Ala 400	Ser	Leu	His	Val	Met 405	
Met Thr 1	Leu Thr	Asn 410	Trp	Tyr	Lys	Pro	Gly 415	Glu	Thr	Arg	Lys	Met 420	
Ile Ser	Thr Trp	Thr 425	Ala	Val	Trp	Val	Lys 430	Ile	Cys	Ala	Ser	Trp 435	
Ala Gly 1	Leu Leu	Leu 440	Tyr	Leu	Trp	Thr	Leu 445	Val	Ala	Pro	Leu	Leu 450	
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<210> 27
<211> 1351
<212> DNA
<213> Homo sapiens
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cgcggcacgt ccgcgaggac ttgaagtcct gagcgctcaa gtttgtccgt 150
aggtcgagag aaggccatgg aggtgccgcc accggcaccg cggagctttc 200
tctgtagagc attgtgccta tttccccgag tctttgctgc cgaagctgtg 250
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ttaatctatc aatatatgca tacatggata tatccaccca cctagatttt 1300
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<210> 28

<211> 285

<212> PRT

<213> Homo sapiens

<400> 28

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Leu Cys Leu Phe Pro Arg Val Phe Ala Ala Glu Ala Val Thr Ala 20 25 30

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Pro Glu Pro Tyr Tyr Pro Glu Ser Gly Trp Asp Arg Leu Arg Glu
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Leu Phe Gly Lys Asp Glu Gln Gln Arg Ile Ser Lys Asp Leu Ala
Asn Ile Cys Lys Thr Ala Ala Thr Ala Gly Ile Ile Gly Trp Val
Tyr Gly Gly Ile Pro Ala Phe Ile His Ala Lys Gln Gln Tyr Ile
Glu Gln Ser Gln Ala Glu Ile Tyr His Asn Arg Phe Asp Ala Val
                110
Gln Ser Ala His Arg Ala Ala Thr Arg Gly Phe Ile Arg Tyr Gly
                125
Trp Arg Trp Gly Trp Arg Thr Ala Val Phe Val Thr Ile Phe Asn
                140
Thr Val Asn Thr Ser Leu Asn Val Tyr Arg Asn Lys Asp Ala Leu
Ser His Phe Val Ile Ala Gly Ala Val Thr Gly Ser Leu Phe Arg
                170
Ile Asn Val Gly Leu Arg Gly Leu Val Ala Gly Gly Ile Ile Gly
Ala Leu Leu Gly Thr Pro Val Gly Gly Leu Leu Met Ala Phe Gln
                200
Lys Tyr Ala Gly Glu Thr Val Gln Glu Arg Lys Gln Lys Asp Arg
                215
Lys Ala Leu His Glu Leu Lys Leu Glu Glu Trp Lys Gly Arg Leu
                230
Gln Val Thr Glu His Leu Pro Glu Lys Ile Glu Ser Ser Leu Arg
Glu Asp Glu Pro Glu Asn Asp Ala Lys Lys Ile Glu Ala Leu Leu
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<210> 29

<211> 324

<212> DNA

<213> Homo sapiens

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tgaacagcag agaatttcaa aggaccttgc taatatctgt aagacggcag 150
ctacagcagg catcattggc tgggtgtatg ggggaatacc agcttttatt 200
catgctaaac aacaatacat tgagcagagc caggcagaaa tttatcataa 250
ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca cgaggcttca 300
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<210> 30

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 262, 330, 371

<223> unknown base

<400> 30

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agagccaggc agaaatttat nataacc 377

<210> 31

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 31

tcgtacagtt acgctctccc 20

<210> 32

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 33
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ataacgaatg aagcctcgtg 20
<210> 34
<211> 40
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<223> Synthetic oligonucleotide probe
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<212> DNA
<213> Homo sapiens
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<210> 36
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<211> 204

<212> PRT

<213> Homo sapiens

<400> 36

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20 25 30

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 Val Gly Val Val Ile Ala Val Gly Ile Phe Leu Phe Leu Ile Ala
                  50
                                      55
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 Phe Phe Tyr Met Ile Ile Leu Leu Leu Val Phe Ile Val Gln Phe
 Ser Val Ser Cys Ala Cys Leu Ala Leu Asn Gln Glu Gln Gly
 Gln Leu Leu Glu Val Gly Trp Asn Asn Thr Ala Ser Ala Arg Asn
                 110
                                     115
                                                          120
Asp Ile Gln Arg Asn Leu Asn Cys Cys Gly Phe Arg Ser Val Asn
                 125
                                     130
 Pro Asn Asp Thr Cys Leu Ala Ser Cys Val Lys Ser Asp His Ser
                 140
Cys Ser Pro Cys Ala Pro Ile Ile Gly Glu Tyr Ala Gly Glu Val
                 155
Leu Arg Phe Val Gly Gly Ile Gly Leu Phe Phe Ser Phe Thr Glu
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                 185
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<210> 37
<211> 390
<212> DNA
<213> Homo sapiens
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<220>

<221> unsure

<222> 20, 35, 61, 83, 106, 130, 133, 187, 232, 260, 336

<223> unknown base

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<213> Homo sapiens
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<221> unsure
<222> 27
<223> unknown base
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 tttttgactt ttacaggtaa gtgcaaagga gaagtggttt catgaaatgt 200
 tctaatgtat aataacattt accttcagcc tcccatcaga atggaacgag 250
 ttttgagtaa tccaggaagt atatctatat gatcttgata ttgttttata 300
 taatttgaag totaaaagac tgcattttta aacaagttag tattaatgcg 350
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 ccgttttcat gaaagttctc agtattgtaa cagcaacttg tcaaacctaa 450
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 gttgtgcccc acttgc 566
<210> 39
<211> 264
<212> DNA
<213> Homo sapiens
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<221> unsure
<222> 84-85, 206
<223> unknown base
<400> 39
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tggttggcaa caatcacggc caagtgactc cgcaaatgac atcccagaga 150
aatcctaaac tgctgtgggt tccgaagtgt taacccaaat gacacctgtc 200
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 ataggagaat atgc 264
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<210> 41
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<223> Synthetic oligonucleotide probe
<400> 41
gagaatatgc tggagagg 18
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<212> PRT

<213> Homo sapiens

<400> 45

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Leu Gly Val Leu Trp Val Ala Gln Met Leu Leu Ala Ala Ser Phe 25

Glu Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser

Cys His Thr Glu Asp Asp Leu Thr Asp Ala Arg Glu Ala Gly Phe

Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val

Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe

Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp

Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly 120 110 115

Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys 130

Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro 150 145

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Gly Pro Gly Ile Pro Glu Thr Ala Ser Val Val Ala Ile Thr Val
Gln Glu Leu Phe Pro Ala Pro Ile Leu Arg Ala Val Pro Ser Ala
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                                    175
                                                        180
Glu Pro Gln Ala Gly Ser Pro Met Thr Leu Ser Cys Gln Thr Lys
Leu Pro Leu Gln Arg Ser Ala Ala Arg Leu Leu Phe Ser Phe Tyr
Lys Asp Gly Arg Ile Val Gln Ser Arg Gly Leu Ser Ser Glu Phe
Gln Ile Pro Thr Ala Ser Glu Asp His Ser Gly Ser Tyr Trp Cys
                230
Glu Ala Ala Thr Glu Asp Asn Gln Val Trp Lys Gln Ser Pro Gln
Leu Glu Ile Arg Val Gln Gly Ala Ser Ser Ser Ala Ala Pro Pro
                260
Thr Leu Asn Pro Ala Pro Gln Lys Ser Ala Ala Pro Gly Thr Ala
                275
Pro Glu Glu Ala Pro Gly Pro Leu Pro Pro Pro Pro Thr Pro Ser
                290
Ser Glu Asp Pro Gly Phe Ser Ser Pro Leu Gly Met Pro Asp Pro
His Leu Tyr His Gln Met Gly Leu Leu Leu Lys His Met Gln Asp
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Val Arg Val Leu Leu Gly His Leu Leu Met Glu Leu Arg Glu Leu
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Ser Gly His Gln Lys Pro Gly Thr Thr Lys Ala Thr Ala Glu
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- <211> 18
- <212> DNA
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- <223> Synthetic oligonucleotide probe
- <400> 46
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- <210> 47
- <211> 18
- <212> DNA
- <213> Artificial Sequence

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<212> DNA
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tggtgctcaa taaatatcta atcataacag c 2181

<210> 52

<211> 321

<212> PRT

<213> Homo sapiens

<400> 52

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Asp Thr Tyr Gly Arg Pro Ile Leu Glu Val Pro Glu Ser Val Thr 20 25 30

Gly Pro Trp Lys Gly Asp Val Asn Leu Pro Cys Thr Tyr Asp Pro 35 40 45

Leu Gln Gly Tyr Thr Gln Val Leu Val Lys Trp Leu Val Gln Arg
50 55 60

Gly Ser Asp Pro Val Thr Ile Phe Leu Arg Asp Ser Ser Gly Asp 65 70 75

His Ile Gln Gln Ala Lys Tyr Gln Gly Arg Leu His Val Ser His 80 85 90

Lys Val Pro Gly Asp Val Ser Leu Gln Leu Ser Thr Leu Glu Met 95 100 105

Asp Asp Arg Ser His Tyr Thr Cys Glu Val Thr Trp Gln Thr Pro 110 115 120

Asp Gly Asn Gln Val Val Arg Asp Lys Ile Thr Glu Leu Arg Val 125 130 135

Gln Lys Leu Ser Val Ser Lys Pro Thr Val Thr Thr Gly Ser Gly 140 145 150

Tyr Gly Phe Thr Val Pro Gln Gly Met Arg Ile Ser Leu Gln Cys 155 160 165

Gln Ala Arg Gly Ser Pro Pro Ile Ser Tyr Ile Trp Tyr Lys Gln 170 175 180

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Gln Thr Asn Asn Gln Glu Pro Ile Lys Val Ala Thr Leu Ser Thr
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Leu Leu Phe Lys Pro Ala Val Ile Ala Asp Ser Gly Ser Tyr Phe
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Cys Thr Ala Lys Gly Gln Val Gly Ser Glu Gln His Ser Asp Ile
Val Lys Phe Val Val Lys Asp Ser Ser Lys Leu Leu Lys Thr Lys
                 230
Thr Glu Ala Pro Thr Thr Met Thr Tyr Pro Leu Lys Ala Thr Ser
                 245
Thr Val Lys Gln Ser Trp Asp Trp Thr Thr Asp Met Asp Gly Tyr
Leu Gly Glu Thr Ser Ala Gly Pro Gly Lys Ser Leu Pro Val Phe
                 275
Ala Ile Ile Leu Ile Ile Ser Leu Cys Cys Met Val Val Phe Thr
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Met Ala Tyr Ile Met Leu Cys Arg Lys Thr Ser Gln Gln Glu His
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Val Tyr Glu Ala Ala Arg
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<210> 54
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<223> Synthetic oligonucleotide probe
<400> 54
gtcggaagac atcccaacaa g 21
<210> 55
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<210> 57
<211> 50
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 57
tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50
<210> 58
<211> 2458
<212> DNA
<213> Homo sapiens
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 ccagctcgcc cgaggtccgt cggaggcqcc cggccgcccc ggagccaagc 150
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<211> 373

<212> PRT

<213> Homo sapiens

<400> 59

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Thr Leu Gly Thr His Thr Glu Ile Lys Arg Val Ala Glu Glu Lys 20 25 30

Val Thr Leu Pro Cys His His Gln Leu Gly Leu Pro Glu Lys Asp 35 40 45

Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln
50 55 60

Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu 65 70 75

Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu
80 85 90

Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp 95 100 105

Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val 110 115 120

Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro 125 130 135

Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr
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Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr
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Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro 170 175 180

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<223> Synthetic oligonucleotide probe

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 Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly
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                 245
 Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Glu Arg Pro
                 260
 Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val
                 275
                                     280
 Lys Pro Ser Ser Ser Ser Gly Ser Arg Ser Ser Gly
                 290
 Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln
                 305
 Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr
                 320
 Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro
                 335
 Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro
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ccagtgcaca gcaggcaacg aagc 24
<210> 61
<211> 24
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actaggctgt atgcctgggt gggc 24
<210> 62
<211> 43
<212> DNA
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<223> Synthetic oligonucleotide probe
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<210> 63
<211> 3534
<212> DNA
<213> Homo sapiens
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 teteceegee tgggeggeet egeegetggg eaggtgetga gegeeeetag 150
 agectecett geogeeteec teetetgeec ggeogeagea gtgcacatgg 200
 ggtgttggag gtagatgggc tcccggcccg ggaggcggcg gtggatgcgg 250
 egetgggeag aageageege egatteeage tgeeeegege geeeegggeg 300
 cccctgcgag tccccggttc agccatgggg acctctccga gcagcagcac 350
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Val Ser Leu Trp Asn Gln Gly Arg Ala Asp Glu Val Val Ser Ala 35 40 45

Ser Val Arg Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp 50 55 60

Ser Lys Asn His Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu 65 70 75

Ser Lys Glu Leu Ile Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile 80 85 90

Ala Ser Ser Phe Thr Glu Thr His Tyr Leu Gln Asp Gly Thr Asp 95 100 105

Val Ser Leu Ala Arg Asn Tyr Thr Gly His Cys Tyr Tyr His Gly
110 115 120

His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys 125 130 135

Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val 140 145 150

Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro 155 160 165

Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His
170 175 180

Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser 185 190 195

Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr 200 205 210

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Arg	Gln	Gly	Lys	Asp 230	Leu	Glu	Lys	Val	Lys 235	Gln	Arg	Leu	Ile	Glu 240
Ile	Ala	Asn	His	Val 245	Asp	Lys	Phe	Tyr	Arg 250	Pro	Leu	Asn	Ile	Arg 255
Ile	Val	Leu	Val	Gly 260	Val	Glu	Val	Trp	Asn 265	Asp	Met	Asp	Lys	Cys 270
Ser	Val	Ser	Gln	Asp 275	Pro	Phe	Thr	Ser	Leu 280	His	Glu	Phe	Leu	Asp 285
Trp	Arg	Lys	Met	Lys 290	Leu	Leu	Pro	Arg	Lys 295	Ser	His	Asp	Asn	Ala 300
Gln	Leu	Val	Ser	Gly 305	Val	Tyr	Phe	Gln	Gly 310	Thr	Thr	Ile	Gly	Met 315
Ala	Pro	Ile	Met	Ser 320	Met	Cys	Thr	Ala	Asp 325	Gln	Ser	Gly	Gly	Ile 330
Val	Met	Asp	His	Ser 335	Asp	Asn	Pro	Leu	Gly 340	Ala	Ala	Val	Thr	Leu 345
Ala	His	Glu	Leu	Gly 350	His	Asn	Phe	Gly	Met 355	Asn	His	Asp	Thr	Leu 360
Asp	Arg	Gly	Cys	Ser 365	Cys	Gln	Met	Ala	Val 370	Glu	Lys	Gly	Gly	Cys 375
Ile	Met	Asn	Ala	Ser 380	Thr	Gly	Tyr	Pro	Phe 385	Pro	Met	Val	Phe	Ser 390
Ser	Cys	Ser	Arg	Lys 395	Asp	Leu	Glu	Thr	Ser 400	Leu	Glu	Lys	Gly	Met 405
Gly	Val	Суз	Leu	Phe 410	Asn	Leu	Pro	Glu	Val 415	Arg	Glu	Ser	Phe	Gly 420
Gly	Gln	Lys	Cys	Gly 425	Asn	Arg	Phe	Val	Glu 430	Glu	Gly	Glu	Glu	Cys 435
Asp	Cys	Gly	Glu	Pro 440	Glu	Glu	Cys	Met	Asn 445	Arg	Cys	Cys	Asn	Ala 450
Thr	Thr	Cys	Thr	Leu 455	Lys	Pro	Asp	Ala	Val 460	Суз	Ala	His	Gly	Leu 465
Cys	Cys	Glu	Asp	Cys 470	Gln	Leu	Lys	Pro	Ala 475	Gly	Thr	Ala	Cys	Arg 480
Asp	Ser	Ser	Asn	Ser 485	Cys	Asp	Leu	Pro	Glu 490	Phe	Cys	Thr	Gly	Ala 495
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<213> Homo sapiens

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Leu Ala Leu Leu Pro Val Gln Val Ser Ser Phe Val Pro Leu 20 25 30

Thr Ser Met Pro Glu Ala Thr Ala Ala Glu Thr Thr Lys Pro Ser 35 40 45

Asn Ser Ala Leu Gln Pro Thr Ala Gly Leu Leu Val Val Leu Leu 50 55 60

Ala Leu Leu His Leu Tyr His

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<223> Synthetic oligonucleotide probe

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acgggcacac tggatcccaa atg 23

<210> 87

<211> 29

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<223> Synthetic oligonucleotide probe

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<212> PRT

<213> Homo sapiens

<400> 90

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Gly Gly Arg Trp Gly Ala Arg Ala Gln Glu Ala Ala Ala Ala Ala 35 40 45

Ala Asp Gly Pro Pro Ala Ala Asp Gly Glu Asp Gly Gln Asp Pro
50 55 60

His Ser Lys His Leu Tyr Thr Ala Asp Met Phe Thr His Gly Ile
65 70 75

Gln Ser Ala Ala His Phe Val Met Phe Phe Ala Pro Trp Cys Gly

His Cys Gln Arg Leu Gln Pro Thr Trp Asn Asp Leu Gly Asp Lys 95 100 105

Tyr Asn Ser Met Glu Asp Ala Lys Val Tyr Val Ala Lys Val Asp 110 115 120

Cys Thr Ala His Ser Asp Val Cys Ser Ala Gln Gly Val Arg Gly
125 130 135

Tyr Pro Thr Leu Lys Leu Phe Lys Pro Gly Gln Glu Ala Val Lys

Tyr Gln Gly Pro Arg Asp Phe Gln Thr Leu Glu Asn Trp Met Leu 155 160 165

Gln Thr Leu Asn Glu Glu Pro Val Thr Pro Glu Pro Glu Val Glu 170 175 180

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Ala Ser Asn Phe Glu Leu His Val Ala Gln Gly Asp His Phe Ile
                                                         210
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Thr Trp Glu Gln Leu Ala Leu Gly Leu Glu His Ser Glu Thr Val
Lys Ile Gly Lys Val Asp Cys Thr Gln His Tyr Glu Leu Cys Ser
Gly Asn Gln Val Arg Gly Tyr Pro Thr Leu Leu Trp Phe Arg Asp
                                     265
                                                         270
Gly Lys Lys Val Asp Gln Tyr Lys Gly Lys Arg Asp Leu Glu Ser
Leu Arg Glu Tyr Val Glu Ser Gln Leu Gln Arg Thr Glu Thr Gly
                                     295
                                                         300
Ala Thr Glu Thr Val Thr Pro Ser Glu Ala Pro Val Leu Ala Ala
Glu Pro Glu Ala Asp Lys Gly Thr Val Leu Ala Leu Thr Glu Asn
Asn Phe Asp Asp Thr Ile Ala Glu Gly Ile Thr Phe Ile Lys Phe
Tyr Ala Pro Trp Cys Gly His Cys Lys Thr Leu Ala Pro Thr Trp
                 350
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Glu Glu Leu Ser Lys Lys Glu Phe Pro Gly Leu Ala Gly Val Lys
Ile Ala Glu Val Asp Cys Thr Ala Glu Arg Asn Ile Cys Ser Lys
                                                         390
Tyr Ser Val Arg Gly Tyr Pro Thr Leu Leu Phe Arg Gly Gly
Lys Lys Val Ser Glu His Ser Gly Gly Arg Asp Leu Asp Ser Leu
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<213> Artificial Sequence

<223> Synthetic oligonucleotide probe

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  <400> 92
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  <210> 93
  <211> 24
  <212> DNA
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  <223> Synthetic oligonucleotide probe
  <400> 93
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  <210> 94
  <211> 23
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  <213> Artificial Sequence
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  <400> 94
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  <210> 95
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  gcatggaaga tgccaaagtc tatgtggcta aagtggactg cacggccca 49
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 <212> DNA
 <213> Homo sapiens
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  gtctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacac 150
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<211> 277

<212> PRT

<213> Homo sapiens

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Leu Val Leu Phe Leu Leu Gln Ile Gln Ser Leu Gly Leu Asp Ile 20 25 30

Asp Ser Arg Pro Thr Ala Glu Val Cys Ala Thr His Thr Ile Ser 35 40 45

Pro Gly Pro Lys Gly Asp Asp Gly Glu Lys Gly Asp Pro Gly Glu
50 55 60

Glu Gly Lys His Gly Lys Val Gly Arg Met Gly Pro Lys Gly Ile
65 70 75

Lys Gly Glu Leu Gly Asp Met Gly Asp Gln Gly Asn Ile Gly Lys

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þæðr

80 85 90

Thr Gly Pro Ile Gly Lys Lys Gly Asp Lys Gly Glu Lys Gly Leu 95 100 105

Leu Gly Ile Pro Gly Glu Lys Gly Lys Ala Gly Thr Val Cys Asp 110 115

Cys Gly Arg Tyr Arg Lys Phe Val Gly Gln Leu Asp Ile Ser Ile 125 130 135

Ala Arg Leu Lys Thr Ser Met Lys Phe Val Lys Asn Val Ile Ala 140 145 150

Gly Ile Arg Glu Thr Glu Glu Lys Phe Tyr Tyr Ile Val Gln Glu 155 160 165

Glu Lys Asn Tyr Arg Glu Ser Leu Thr His Cys Arg Ile Arg Gly
170 175 180

Gly Met Leu Ala Met Pro Lys Asp Glu Ala Ala Asn Thr Leu Ile 185 190 195

Ala Asp Tyr Val Ala Lys Ser Gly Phe Phe Arg Val Phe Ile Gly 200 205 210

Val Asn Asp Leu Glu Arg Glu Gly Gln Tyr Met Ser Thr Asp Asn 215 220 225

Thr Pro Leu Gln Asn Tyr Ser Asn Trp Asn Glu Gly Glu Pro Ser 230 235 240

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Arg Trp Asn Asp Thr Glu Cys His Leu Thr Met Tyr Phe Val Cys 260 265 270

Glu Phe Ile Lys Lys Lys

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 98

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<210> 99

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<212> DNA

<213> Artificial Sequence

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Arg Ala Leu Arg Ala Arg Ala Leu Ala Ala Ala Ala Ala Asp Pro 95 100 105

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Leu Ala Gln Gln Arg Ala Ala His Thr Phe Leu Ile His Gly Ser 125 130 135

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Ala Pro Gly Ala Gly Asp Ala Ala Ala Gly Ser Gly Ala Glu Phe 185 190 195

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Glu	Gly	Phe	Asp	Pro 695	Ser	Thr	Leu	Ser	Asp 700	Pro	Leu	Tyr	Val	Leu 705
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Trp Gly Gln Ala Leu Glu Glu Glu Glu Glu Gly Ala Leu Leu Ala 50 55 60

Gln Ala Gly Glu Lys Leu Glu Pro Ser Thr Thr Ser Thr Ser Gln
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Pro His Leu Ile Phe Ile Leu Ala Asp Asp Gln Gly Phe Arg Asp 80 85 90

Val Gly Tyr His Gly Ser Glu Ile Lys Thr Pro Thr Leu Asp Lys 95 100 105

Leu Ala Ala Glu Gly Val Lys Leu Glu Asn Tyr Tyr Val Gln Pro

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Ile	His	Thr	Gly	Leu 140	Gln	His	Ser	Ile	Ile 145	Arg	Pro	Thr	Gln	Pro 150
Asn	Cys	Leu	Pro	Leu 155	Asp	Asn	Ala	Thr	Leu 160	Pro	Gln	Lys	Leu	Lys 165
Glu	Val	Gly	Tyr	Ser 170	Thr	His	Met	Val	Gly 175	Lys	Trp	His	Leu	Gly 180
Phe	Asn	Arg	Lys	Glu 185	Cys	Met	Pro	Thr	Arg 190	Arg	Gly	Phe	Asp	Thr 195
Phe	Phe	Gly	Ser	Leu 200	Leu	Gly	Ser	Gly	Asp 205	Tyr	Tyr	Thr	His	Tyr 210
Lys	Суз	Asp	Ser	Pro 215	Gly	Met	Суз	Gly	Tyr 220	Asp	Leu	Tyr	Glu	Asn 225
Asp	Asn	Ala	Ala	Trp 230	Asp	Tyr	Asp	Asn	Gly 235	Ile	Tyr	Ser	Thr	Gln 240
Met	Tyr	Thr	Gln	Arg 245	Val	Gln	Gln	Ile	Leu 250	Ala	Ser	His	Asn	Pro 255
Thr	Lys	Pro	Ile	Phe 260	Leu	Tyr	Thr	Ala	Tyr 265	Gln	Ala	Val	His	Ser 270
Pro	Leu	Gln	Ala	Pro 275	Gly	Arg	Tyr	Phe	Glu 280	His	Tyr	Arg	Ser	Ile 285
Ile	Asn	Ile	Asn	Arg 290	Arg	Arg	Tyr	Ala	Ala 295	Met	Leu	Ser	Суз	Leu 300
Asp	Glu	Ala	Ile	Asn 305	Asn	Val	Thr	Leu	Ala 310	Leu	Lys	Thr	Tyr	Gly 315
Phe	Tyr	Asn	Asn	Ser 320	Ile	Ile	Ile	Tyr	Ser 325	Ser	Asp	Asn	Gly	Gly 330
Gln	Pro	Thr	Ala	Gly 335	Gly	Ser	Asn	Trp	Pro 340	Leu	Arg	Gly	Ser	Lys 345
Gly	Thr	Tyr	Trp	Glu 350	Gly	Gly	Ile	Arg	Ala 355	Val	Gly	Phe	Val	His 360
Ser	Pro	Leu	Leu	Lys 365	Asn	Lys	Gly	Thr	Val 370	Cys	Lys	Glu	Leu	Val 375
His	Ile	Thr	Asp	Trp 380	Tyr	Pro	Thr	Leu	Ile 385	Ser	Leu	Ala	Glu	Gly 390
Gln	Ile	Asp	Glu	Asp 395	Ile	Gln	Leu	Asp	Gly 400	Tyr	Asp	Ile	Trp	Glu 405

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catgataaac tgtcagtaca gctgtgaaga cacagaagaa gggccacagt 600
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tgtactatgg atagccatac gtgcagccac catgccaatt gcttcaatac 850
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Glu Asn Gly Asn Leu Lys Glu Lys Asp Ile Leu Val Leu Pro Leu
50 55 60

Asp Leu Thr Asp Thr Gly Ser His Glu Ala Ala Thr Lys Ala Val 65 70 75

Leu Gln Glu Phe Gly Arg Ile Asp Ile Leu Val Asn Asn Gly Gly

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80 85 90

Met Ser Gln Arg Ser Leu Cys Met Asp Thr Ser Leu Asp Val Tyr 95 100 105

Arg Lys Leu Ile Glu Leu Asn Tyr Leu Gly Thr Val Ser Leu Thr
110 115 120

Lys Cys Val Leu Pro His Met Ile Glu Arg Lys Gln Gly Lys Ile 125 130 135

Val Thr Val Asn Ser Ile Leu Gly Ile Ile Ser Val Pro Leu Ser 140 145 150

Ile Gly Tyr Cys Ala Ser Lys His Ala Leu Arg Gly Phe Phe Asn 155 160 165

Gly Leu Arg Thr Glu Leu Ala Thr Tyr Pro Gly Ile Ile Val Ser 170 175 180

Asn Ile Cys Pro Gly Pro Val Gln Ser Asn Ile Val Glu Asn Ser 185 190 195

Leu Ala Gly Glu Val Thr Lys Thr Ile Gly Asn Asn Gly Asp Gln 200 205 210

Ser His Lys Met Thr Thr Ser Arg Cys Val Arg Leu Met Leu Ile 215 220 225

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Ile Thr Thr Tyr Ala Ile Asn Val Ser Leu Met Trp Leu Ser Phe
35 40

Thr Val Pro Gly Glu Trp Pro Trp Gln Ala Ser Val Arg Arg Gln 65 70 75

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Asn	Ser	Trp	Ser	Val 110	Val	Leu	Gly	Ser	Leu 115	Gln	Arg	Glu	Gly	Leu 120
Ser	Pro	Gly	Ala	Glu 125	Glu	Val	Gly	Val	Ala 130	Ala	Leu	Gln	Leu	Pro 135
Arg	Ala	Tyr	Asn	His 140	Tyr	Ser	Gln	Gly	Ser 145	Asp	Leu	Ala	Leu	Leu 150
Gln	Leu	Ala	His	Pro 155	Thr	Thr	His	Thr	Pro 160	Leu	Cys	Leu	Pro	Gln 165
Pro	Ala	His	Arg	Phe 170	Pro	Phe	Gly	Ala	Ser 175	Cys	Trp	Ala	Thr	Gly 180
Trp	Asp	Gln	Asp	Thr 185	Ser	Asp	Ala	Pro	Gly 190	Thr	Leu	Arg	Asn	Leu 195
Arg	Leu	Arg	Leu	Ile 200	Ser	Arg	Pro	Thr	Cys 205	Asn	Cys	Ile	Tyr	Asn 210
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Asp	Ser	Gly	Gly	Pro 245	Val	Leu	Cys	Leu	Glu 250	Pro	Asp	Gly	His	Trp 255
Val	Gln	Ala	Gly	Ile 260	Ile	Ser	Phe	Ala	Ser 265	Ser	Cys	Ala	Gln	Glu 270
Asp	Ala	Pro	Val	Leu 275	Leu	Thr	Asn	Thr	Ala 280	Ala	His	Ser	Ser	Trp 285
Leu	Gln	Ala	Arg	Val 290	Gln	Gly	Ala	Ala	Phe 295	Leu	Ala	Gln	Ser	Pro 300
Glu	Thr	Pro	Glu	Met 305	Ser	Asp	Glu	Asp	Ser 310	Cys	Val	Ala	Cys	Gly 315
Ser	Leu	Arg	Thr	Ala 320	Gly	Pro	Gln	Ala	Gly 325	Ala	Pro	Ser	Pro	Trp 330
Pro	Trp	Glu	Ala	Arg 335	Leu	Met	His	Gln	Gly 340	Gln	Leu	Ala	Cys	Gly 345
Gly	Ala	Leu	Val	Ser 350	Glu	Glu	Ala	Val	Leu 355	Thr	Ala	Ala	His	Cys 360
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Leu	Ala	Gln	Pro	Val 410	Thr	Leu	Gly	Ala	Ser 415	Leu	Arg	Pro	Leu	Cys 420
Leu	Pro	Tyr	Pro	Asp 425	His	His	Leu	Pro	Asp 430	Gly	Glu	Arg	Gly	Trp 435
Val	Leu	Gly	Arg	Ala 440	Arg	Pro	Gly	Ala	Gly 445	Ile	Ser	Ser	Leu	Gln 450
Thr	Val	Pro	Val	Thr 455	Leu	Leu	Gly	Pro	Arg 460	Ala	Cys	Ser	Arg	Leu 465
His	Ala	Ala	Pro	Gly 470	Gly	Asp	Gly	Ser	Pro 475	Ile	Leu	Pro	Gly	Met 480
Val	Cys	Thr	Ser	Ala 485	Val	Gly	Glu	Leu	Pro 490	Ser	Cys	Glu	Gly	Leu 495
Ser	Gly	Ala	Pro	Leu 500	Val	His	Glu	Val	Arg 505	Gly	Thr	Trp	Phe	Leu 510
Ala	Gly	Leu	His	Ser 515	Phe	Gly	Asp	Ala	Cys 520	Gln	Gly	Pro	Ala	Arg 525
Pro	Ala	Val	Phe	Thr 530	Ala	Leu	Pro	Ala	Tyr 535	Glu	Asp	Trp	Val	Ser 540
Ser	Leu	Asp	Trp	Gln 545	Val	Tyr	Phe	Ala	Glu 550	Glu	Pro	Glu	Pro	Glu 555
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Ala	Thr	Leu	Cys	Cys 50	Ser	Phe	Ser	Pro	Glu 55	Pro	Gly	Phe	Ser	Leu 60
Ala	Gln	Leu	Asn	Leu 65	Ile	Trp	Gln	Leu	Thr 70	Asp	Thr	Lys	Gln	Leu 75
Val	His	Ser	Phe	Ala 80	Glu	Gly	Gln	Asp	Gln 85	Gly	Ser	Ala	Tyr	Ala 90
Asn	Arg	Thr	Ala	Leu 95	Phe	Pro	Asp	Leu	Leu 100	Ala	Gln	Gly	Asn	Ala 105
Ser	Leu	Arg	Leu	Gln 110	Arg	Val	Arg	Val	Ala 115	Asp	Glu	Gly	Ser	Phe 120
Thr	Суз	Phe	Val	Ser 125	Ile	Arg	Asp	Phe	Gly 130	Ser	Ala	Ala	Val	Ser 135
Leu	Gln	Val	Ala	Ala 140	Pro	Tyr	Ser	Lys	Pro 145	Ser	Met	Thr	Leu	Glu 150
Pro	Asn	Lys	Asp	Leu 155	Arg	Pro	Gly	Asp	Thr 160	Val	Thr	Ile	Thr	Cys 165
Ser	Ser	Tyr	Gln	Gly 170	Tyr	Pro	Glu	Ala	Glu 175	Val	Phe	Trp	Gln	Asp 180
Gly	Gln	Gly	Val	Pro 185	Leu	Thr	Gly	Asn	Val 190	Thr	Thr	Ser	Gln	Met 195
Ala	Asn	Glu	Gln	Gly 200	Leu	Phe	Asp	Val	His 205	Ser	Val	Leu	Arg	Val 210
Val	Leu	Gly	Ala	Asn 215		Thr	Tyr	Ser	Cys 220		Val	Arg	Asn	Pro 225
Val	Leu	Gln	Gln	Asp 230	Ala	His	Xaa	Ser	Val 235	Thr	Ile	Thr	Gly	Gln 240
Pro	Met	Thr	Phe	Pro 245	Pro	Glu	Ala	Leu	Trp 250	Val	Thr	Val	Gly	Leu 255
Ser	Val	Cys	Leu	Ile 260	Ala	Leu	Leu	Val	Ala 265	Leu	Ala	Phe	Val	Cys 270
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<223> unknown base
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<212> PRT

<213> Homo sapiens

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Asp Leu Met Leu Val His Tyr Glu Gly Tyr Leu Glu Lys Asp Gly
50 55 60

Ser Leu Phe His Ser Thr His Lys His Asn Asn Gly Gln Pro Ile 657075

Trp Phe Thr Leu Gly Ile Leu Glu Ala Leu Lys Gly Trp Asp Gln 80 85 90

Gly Leu Lys Gly Met Cys Val Gly Glu Lys Arg Lys Leu Ile Ile 95 100 105

Pro Pro Ala Leu Gly Tyr Gly Lys Glu Gly Lys Gly Lys Ile Pro 110 115 120

Pro Glu Ser Thr Leu Ile Phe Asn Ile Asp Leu Leu Glu Ile Arg 125 130 135

Asn Gly Pro Arg Ser His Glu Ser Phe Gln Glu Met Asp Leu Asn 140 145 150

Asp Asp Trp Lys Leu Ser Lys Asp Glu Val Lys Ala Tyr Leu Lys 155 160

Lys Glu Phe Glu Lys His Gly Ala Val Val Asn Glu Ser His His 170 175 180

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Leu

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<211> 215

<212> PRT

<213> Homo sapiens

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Glu Val Thr Val Pro Ala Thr Leu Asn Val Leu Asn Gly Ser Asp 35 40 45

Ala Arg Leu Pro Cys Thr Phe Asn Ser Cys Tyr Thr Val Asn His
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Lys Gln Phe Ser Leu Asn Trp Thr Tyr Gln Glu Cys Asn Asn Cys
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Ser Glu Glu Met Phe Leu Gln Phe Arg Met Lys Ile Ile Asn Leu 80 85 90

Lys Leu Glu Arg Phe Gln Asp Arg Val Glu Phe Ser Gly Asn Pro 95 100 105

Ser Lys Tyr Asp Val Ser Val Met Leu Arg Asn Val Gln Pro Glu 110 115 120

Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg 125 130 135

His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu 140 145 150

Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser 155 160 165

Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val 170 175 180

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Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro 200 205 210

Asp Asp Gly Ala Lys 215

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Ala Leu Pro Ala Gly Arg His Pro Pro Val Val Leu Val Pro Gly 35 40 45

Asp Leu Gly Asn Gln Leu Glu Ala Lys Leu Asp Lys Pro Thr Val 50 55 60

Val His Tyr Leu Cys Ser Lys Lys Thr Glu Ser Tyr Phe Thr Ile 65 70 75

Trp Leu Asn Leu Glu Leu Leu Leu Pro Val Ile Ile Asp Cys Trp 80 85 90

Ile Asp Asn Ile Arg Leu Val Tyr Asn Lys Thr Ser Arg Ala Thr 95 100 105

Gln Phe Pro Asp Gly Val Asp Val Arg Val Pro Gly Phe Gly Lys

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	Thr	Arg	Gly	Glu	Asp 155	Val	Arg	Gly	Ala	Pro 160	Tyr	Asp	Trp	Arg	Arg 165
	Ala	Pro	Asn	Glu	Asn 170	Gly	Pro	Tyr	Phe	Leu 175	Ala	Leu	Arg	Glu	Met 180
	Ile	Glu	Glu	Met	Tyr 185	Gln	Leu	Tyr	Gly	Gly 190	Pro	Val	Val	Leu	Val 195
	Ala	His	Ser	Met	Gly 200	Asn	Met	Tyr	Thr	Leu 205	Tyr	Phe	Leu	Gln	Arg 210
	Gln	Pro	Gln	Ala	Trp 215	Lys	Asp	Lys	Tyr	Ile 220	Arg	Ala	Phe	Val	Ser 225
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	Ala	Ser	Gly	Asp	Asn 245	Asn	Arg	Ile	Pro	Val 250	Ile	Gly	Pro	Leu	Lys 255
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	Pro	Tyr	Asn	Tyr	Thr 275	Trp	Ser	Pro	Glu	Lys 280	Val	Phe	Val	Gln	Thr 285
	Pro	Thr	Ile	Asn	Tyr 290	Thr	Leu	Arg	Asp	Tyr 295	Arg	Lys	Phe	Phe	Gln 300
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<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

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 Glu Gly Tyr Ser Asn Ala His Glu Ser Lys Gln Met Tyr Cys Val
 Phe Asn Arg Asn Glu Asp Ala Cys Arg Tyr Gly Ser Ala Ile Gly
 Val Leu Ala Phe Leu Ala Ser Ala Phe Phe Leu Val Val Asp Ala
 Tyr Phe Pro Gln Ile Ser Asn Ala Thr Asp Arg Lys Tyr Leu Val
 Ile Gly Asp Leu Leu Phe Ser Ala Leu Trp Thr Phe Leu Trp Phe
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 Lys Asp Val Leu Val Gly Ala Asp Ser Val Arg Ala Ala Ile Thr
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 Phe Ser Phe Phe Ser Ile Phe Ser Trp Gly Val Leu Ala Ser Leu
 Ala Tyr Gln Arg Tyr Lys Ala Gly Val Asp Asp Phe Ile Gln Asn
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 Tyr Val Asp Pro Thr Pro Asp Pro Asn Thr Ala Tyr Ala Ser Tyr
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cctcagagcc ctggagactg ccaggtgggc ctgctgccac tgtaagccaa 3000
aaggtgggga agtectgaet ceagggteet tgeeceaece etgeetgeea 3050
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<210> 169

<211> 802

<212> PRT

<213> Homo sapiens

<400> 169

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Cys	Glu	Asp	Ser	Lys 35	Arg	Lys	Ala	Arg	Gly 40	Tyr	Leu	Arg	Leu	Val 45
Pro	Leu	Phe	Val	Leu 50	Leu	Ala	Leu	Leu	Val 55	Leu	Ala	Ser	Ala	Gly 60
Val	Leu	Leu	Trp	Tyr 65	Phe	Leu	Gly	Tyr	Lys 70	Ala	Glu	Val	Met	Val 75
Ser	Gln	Val	Tyr	Ser 80	Gly	Ser	Leu	Arg	Val 85	Leu	Asn	Arg	His	Phe 90
Ser	Gln	Asp	Leu	Thr 95	Arg	Arg	Glu	Ser	Ser 100	Ala	Phe	Arg	Ser	Glu 105
Thr	Ala	Lys	Ala	Gln 110	Lys	Met	Leu	Lys	Glu 115	Leu	Ile	Thr	Ser	Thr 120
Arg	Leu	Gly	Thr	Tyr 125	Tyr	Asn	Ser	Ser	Ser 130	Val	Tyr	Ser	Phe	Gly 135
Glu	Gly	Pro	Leu	Thr 140	Cys	Phe	Phe	Trp	Phe 145	Ile	Leu	Gln	Ile	Pro 150
Glu	His	Arg	Arg	Leu 155	Met	Leu	Ser	Pro	Glu 160	Val	Val	Gln	Ala	Leu 165
Leu	Val	Glu	Glu	Leu 170	Leu	Ser	Thr	Val	Asn 175	Ser	Ser	Ala	Ala	Val 180
Pro	Tyr	Arg	Ala	Glu 185	Tyr	Glu	Val	Asp	Pro 190	Glu	Gly	Leu	Val	Ile 195
Leu	Glu	Ala	Ser	Val 200	Lys	Asp	Ile	Ala	Ala 205	Leu	Asn	Ser	Thr	Leu 210
Gly	Cys	Tyr	Arg	Tyr 215	Ser	Tyr	Val	Gly	Gln 220	Gly	Gln	Val	Leu	Arg 225
Leu	Lys	Gly	Pro	Asp 230	His	Leu	Ala	Ser	Ser 235	Cys	Leu	Trp	His	Leu 240
Gln	Gly	Pro	Lys	Asp 245	Leu	Met	Leu	Lys	Leu 250	Arg	Leu	Glu	Trp	Thr 255
Leu	Ala	Glu	Cys	Arg 260	Asp	Arg	Leu	Ala	Met 265	Tyr	Asp	Val	Ala	Gly 270
Pro	Leu	Glu	Lys	Arg 275	Leu	Ile	Thr	Ser	Val 280	Tyr	Gly	Cys	Ser	Arg 285
Gln	Glu	Pro	Val	Val	Glu	Val	Leu	Ala	Ser	Gly	Ala	Ile	Met	Ala

				290					295	•				300
Val	. Val	Trp	Lys	Lys 305	Gly	Leu	His	Ser	Tyr 310		Asp	Prc	Phe	Val 315
Leu	Ser	: Val	. Glr	Pro 320	Val	Val	Phe	Gln	Ala 325		Glu	Val	Asn	Leu 330
Thr	Leu	Asp	Asn	Arg 335	Leu	Asp	Ser	Gln	Gly 340		Leu	Ser	Thr	Pro 345
Tyr	Phe	Pro	Ser	Tyr 350	Tyr	Ser	Pro	Gln	Thr 355		Cys	Ser	Trp	His 360
Leu	Thr	Val	Pro	Ser 365	Leu	Asp	Tyr	Gly	Leu 370		Leu	Trp	Phe	Asp 375
Ala	Tyr	Ala	Leu	Arg 380	Arg	Gln	Lys	Tyr	Asp 385	Leu	Pro	Cys	Thr	Gln 390
Gly	Gln	Trp	Thr	Ile 395	Gln	Asn	Arg	Arg	Leu 400	Cys	Gly	Leu	Arg	Ile 405
Leu	Gln	Pro	Tyr	Ala 410	Glu	Arg	Ile	Pro	Val 415	Val	Ala	Thr	Ala	Gly 420
Ile	Thr	Ile	Asn	Phe 425	Thr	Ser	Gln	Ile	Ser 430	Leu	Thr	Gly	Pro	Gly 435
Val	Arg	Val	His	Tyr 440	Gly	Leu	Tyr	Asn	Gln 445	Ser	Asp	Pro	Cys	Pro 450
Gly	Glu	Phe	Leu	Cys 455	Ser	Val	Asn	Gly	Leu 460	Cys	Val	Pro	Ala	Cys 465
Asp	Gly	Val	Lys	Asp 470	Cys	Pro	Asn	Gly	Leu 475	Asp	Glu	Arg	Asn	Cys 480
Val	Cys	Arg	Ala	Thr 485	Phe	Gln	Cys	Lys	Glu 490	Asp	Ser	Thr	Cys	Ile 495
Ser	Leu	Pro	Lys	Val 500	Cys	Asp	Gly	Gln	Pro 505	Asp	Суз	Leu	Asn	Gly 510
Ser	Asp	Glu	Glu	Gln 515	Cys	Gln	Glu	Gly	Val 520	Pro	Cys	Gly	Thr	Phe 525
Thr	Phe	Gln	Cys	Glu 530	Asp	Arg	Ser	Cys	Val 535	Lys	Lys	Pro	Asn	Pro 540
Gln	Cys	Asp	Gly	Arg 545	Pro	Asp	Cys	Arg	Asp 550	Gly	Ser	Asp	Glu	Glu 555
His	Cys	Asp	Суз	Gly 560	Leu	Gln	Gly	Pro	Ser 565	Ser	Arg	Ile	Val	Gly 570
Gly	Ala	Val	Ser	Ser 575	Glu	Gly	Glu	Trp	Pro 580	Trp	Gln	Ala	Ser	Leu 585

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Gln Val Arg Gly Arg His Ile Cys Gly Gly Ala Leu Ile Ala Asp
Arg Trp Val Ile Thr Ala Ala His Cys Phe Gln Glu Asp Ser Met
                 605
Ala Ser Thr Val Leu Trp Thr Val Phe Leu Gly Lys Val Trp Gln
Asn Ser Arg Trp Pro Gly Glu Val Ser Phe Lys Val Ser Arg Leu
Leu Leu His Pro Tyr His Glu Glu Asp Ser His Asp Tyr Asp Val
Ala Leu Leu Gln Leu Asp His Pro Val Val Arg Ser Ala Ala Val
                                                         675
Arg Pro Val Cys Leu Pro Ala Arg Ser His Phe Phe Glu Pro Gly
Leu His Cys Trp Ile Thr Gly Trp Gly Ala Leu Arg Glu Gly Gly
                695
                                                         705
Pro Ile Ser Asn Ala Leu Gln Lys Val Asp Val Gln Leu Ile Pro
                710
Gln Asp Leu Cys Ser Glu Ala Tyr Arg Tyr Gln Val Thr Pro Arg
                725
                                                         735
Met Leu Cys Ala Gly Tyr Arg Lys Gly Lys Lys Asp Ala Cys Gln
Gly Asp Ser Gly Gly Pro Leu Val Cys Lys Ala Leu Ser Gly Arg
                755
                                                         765
Trp Phe Leu Ala Gly Leu Val Ser Trp Gly Leu Gly Cys Gly Arg
Pro Asn Tyr Phe Gly Val Tyr Thr Arg Ile Thr Gly Val Ile Ser
                785
Trp Ile Gln Gln Val Val Thr
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<210> 170

<211> 1327

<212> DNA

<213> Homo sapiens

<400> 170

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tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250
ccccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300
gcaaagagga cagcacatgc atctcactgc ccaaggtctg tgatgggcag 350
cctgattgtc tcaacggcag cgatgaagag cagtgccagg aaggggtgcc 400
atgtgggaca ttcaccttcc agtgtgagga ccggagctgc gtgaagaagc 450
ccaaccegea gtgtgatggg eggeeegaet geagggaegg eteggatgag 500
gagcactgtg actgtggcct ccagggcccc tccagccgca ttgttggtgg 550
agctgtgtcc tccgagggtg agtggccatg gcaggccagc ctccaggttc 600
ggggtcgaca catctgtggg ggggccctca tcgctgaccg ctgggtgata 650
acagetgeec actgetteca ggaggacage atggeeteca eggtgetgtg 700
gaccgtgttc ctgggcaagg tgtggcagaa ctcgcgctgg cctggagagg 750
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agccatgact acgacgtggc gctgctgcag ctcgaccacc cggtggtgcg 850
ctcggccgcc gtgcgccccg tctgcctgcc cgcgcgctcc cacttcttcg 900
agcccggcct gcactgctgg attacgggct ggggcgcctt gcgcgagggc 950
ggccccatca gcaacgctct gcagaaagtg gatgtgcagt tgatcccaca 1000
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gtgccggcta ccgcaagggc aagaaggatg cctgtcaggg tgactcaggt 1100
ggtccgctgg tgtgcaaggc actcagtggc cgctggttcc tggcggggct 1150
ggtcagctgg ggcctgggct gtggccggcc taactacttc ggcgtctaca 1200
cccgcatcac aggtgtgatc agctggatcc agcaagtggt gacctgagga 1250
actgcccccc tgcaaagcag ggcccacctc ctggactcag agagcccagg 1300
gcaactgcca agcagggga caagtat 1327
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<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

taacagctgc ccactgcttc cagg 24

<210> 172

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 <212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 172
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<210> 173
<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
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<210> 174
<211> 25
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 174
 tgcctatgca ctgaggaggc agaag 25
<210> 175
<211> 25
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 175
 aggcagggac acagagtcca ttcac 25
<210> 176
<211> 50
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 176
 agtatgattt gccgtgcacc cagggccagt ggacgatcca gaacaggagg 50
<210> 177
<211> 1510
<212> DNA
<213> Homo sapiens
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<400> 177

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<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

Met Ser Asn Ser Val Pro Leu Leu Cys Phe Trp Ser Leu Cys Tyr
1 5 10 15

Cys Phe Ala Ala Gly Ser Pro Val Pro Phe Gly Pro Glu Gly Arg
20 25 30

Leu Glu Asp Lys Leu His Lys Pro Lys Ala Thr Gln Thr Glu Val
35 40 45

Lys Pro Ser Val Arg Phe Asn Leu Arg Thr Ser Lys Asp Pro Glu
50 55 60

His Glu Gly Cys Tyr Leu Ser Val Gly His Ser Gln Pro Leu Glu 65 70 75

Asp Cys Ser Phe Asn Met Thr Ala Lys Thr Phe Phe Ile Ile His 80 85 90

Gly Trp Thr Met Ser Gly Ile Phe Glu Asn Trp Leu His Lys Leu 95 100 105

Val Ser Ala Leu His Thr Arg Glu Lys Asp Ala Asn Val Val 110 115 120

Val Asp Trp Leu Pro Leu Ala His Gln Leu Tyr Thr Asp Ala Val 125 130 135

Asn Asn Thr Arg Val Val Gly His Ser Ile Ala Arg Met Leu Asp 140 145 150

Trp Leu Gln Glu Lys Asp Asp Phe Ser Leu Gly Asn Val His Leu 155 160 165

Ile Gly Tyr Ser Leu Gly Ala His Val Ala Gly Tyr Ala Gly Asn 170 175 180

Phe Val Lys Gly Thr Val Gly Arg Ile Thr Gly Leu Asp Pro Ala 185 190 195

Gly Pro Met Phe Glu Gly Ala Asp Ile His Lys Arg Leu Ser Pro 200 205 210

Asp Asp Ala Asp Phe Val Asp Val Leu His Thr Tyr Thr Arg Ser 215 220 225

Phe Gly Leu Ser Ile Gly Ile Gln Met Pro Val Gly His Ile Asp $230 \hspace{1cm} 235 \hspace{1cm} 240$

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Ile Tyr Pro Asn Gly Gly Asp Phe Gln Pro Gly Cys Gly Leu Asn
 Asp Val Leu Gly Ser Ile Ala Tyr Gly Thr Ile Thr Glu Val Val
                 260
                                      265
                                                          270
 Lys Cys Glu His Glu Arg Ala Val His Leu Phe Val Asp Ser Leu
 Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser
 Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg
                 305
 Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg
 Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg
 Gly Asn Leu Gln Ser Leu Glu Cys Pro
                 350
<210> 179
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 179
 gtgagcatga gcgagccgtc cac 23
<210> 180
<211> 26
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 180
gctattacaa cggttcttgc ggcagc 26
<210> 181
<211> 44
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 181
ttgactctct ggtgaatcag gacaagccga gttttgcctt ccag 44
<210> 182
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- <211> 3240 <212> DNA
- <213> Homo sapiens

<400> 182 cggacgcgtg ggcggacgcg tgggcctggg caagggccgg ggcgccgggc 50 acgcgctgga ggagtggagc agcacccggc cggccctggg ggctgacagt 150 cggcaaagtt tggcccgaag aggaagtggt ctcaaacccc ggcaggtggc 200 gaccaggcca gaccaggggc gctcgctgcc tgcgggcggg ctgtaggcga 250 gggcgcccc cagtgccgag acccggggct tcaggagccg gccccgggag 300 agaagagtgc ggcggcggac ggagaaaca actccaaagt tggcgaaagg 350 caccgcccct actcccgggc tgccgccgcc tccccgcccc cagccctggc 400 atccagagta egggtegage eegggeeatg gageeecet ggggaggegg 450 caccagggag cctgggcgcc cggggctccg ccgcgacccc atcgggtaga 500 ccacagaagc tccgggaccc ttccggcacc tctggacagc ccaggatgct 550 gttggccacc ctcctcctcc tcctccttgg aggcgctctg gcccatccag 600 accggattat ttttccaaat catgcttgtg aggacccccc agcagtgctc 650 ttagaagtgc agggcacctt acagaggccc ctggtccggg acagccgcac 700 ctcccctgcc aactgcacct ggctcatcct gggcagcaag gaacagactg 750 tcaccatcag gttccagaag ctacacctgg cctgtggctc agagcgctta 800 accetacget ecceteteca gecactgate tecetgtgtg aggeacetee 850 cagccctctg cagctgcccg ggggcaacgt caccatcact tacagctatg 900 ctggggccag agcacccatg ggccagggct tcctgctctc ctacagccaa 950 gattggctga tgtgcctgca ggaagagttt cagtgcctga accaccgctg 1000 tgtatctgct gtccagcgct gtgatgggt tgatgcctgt ggcgatggct 1050 ctgatgaagc aggttgcagc tcagacccct tccctggcct gaccccaaga 1100 cccgtcccct ccctgccttg caatgtcacc ttggaggact tctatggggt 1150 cttctcctct cctggatata cacacctagc ctcagtctcc cacccccagt 1200 cctgccattg gctgctggac ccccatgatg gccggcggct ggccgtgcgc 1250 ttcacagccc tggacttggg ctttggagat gcagtgcatg tgtatgacgg 1300 ccctgggccc cctgagagct cccgactact gcgtagtctc acccacttca 1350

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caccggaatg ccaattaact agagaccctc cagccccaa ggggaggatt 3100
tgggcagaac ctgaggtttt gccatccaca atccctccta cagggcctgg 3150
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tcagtaagtt gaggtcaaaa ataaaggaat catacatctc 3240

<210> 183

<211> 713

<212> PRT

<213> Homo sapiens

<400> 183

Met Leu Leu Ala Thr Leu Leu Leu Leu Leu Gly Gly Ala Leu 1 5 10 15

Ala His Pro Asp Arg Ile Ile Phe Pro Asn His Ala Cys Glu Asp 20 25 30

Pro Pro Ala Val Leu Leu Glu Val Gln Gly Thr Leu Gln Arg Pro 35 40 45

Leu Val Arg Asp Ser Arg Thr Ser Pro Ala Asn Cys Thr Trp Leu 50 55 60

Ile Leu Gly Ser Lys Glu Gln Thr Val Thr Ile Arg Phe Gln Lys
65 70 75

Leu His Leu Ala Cys Gly Ser Glu Arg Leu Thr Leu Arg Ser Pro 80 85 90

Leu Gln Pro Leu Ile Ser Leu Cys Glu Ala Pro Pro Ser Pro Leu 95 100 105

Gln Leu Pro Gly Gly Asn Val Thr Ile Thr Tyr Ser Tyr Ala Gly
110 115 120

Ala Arg Ala Pro Met Gly Gln Gly Phe Leu Leu Ser Tyr Ser Gln 125 130 135

Asp Trp Leu Met Cys Leu Gln Glu Glu Phe Gln Cys Leu Asn His 140 145 150

Arg Cys Val Ser Ala Val Gln Arg Cys Asp Gly Val Asp Ala Cys 155 160 165

Gly Asp Gly Ser Asp Glu Ala Gly Cys Ser Ser Asp Pro Phe Pro

				170					175					180
Gly	Leu	Thr	Pro	Arg 185	Pro	Val	Pro	Ser	Leu 190	Pro	Cys	Asn	Val	Thr 195
Leu	Glu	Asp	Phe	Tyr 200	Gly	Val	Phe	Ser	Ser 205	Pro	Gly	Tyr	Thr	His 210
Leu	Ala	Ser	Val	Ser 215	His	Pro	Gln	Ser	Cys 220	His	Trp	Leu	Leu	Asp 225
Pro	His	Asp	Gly	Arg 230	Arg	Leu	Ala	Val	Arg 235	Phe	Thr	Ala	Leu	Asp 240
Leu	Gly	Phe	Gly	Asp 245	Ala	Val	His	Val	Tyr 250	Asp	Gly	Pro	Gly	Pro 255
Pro	Glu	Ser	Ser	Arg 260	Leu	Leu	Arg	Ser	Leu 265	Thr	His	Phe	Ser	Asn 270
Gly	Lys	Ala	Val	Thr 275	Val	Glu	Thr	Leu	Ser 280	Gly	Gln	Ala	Val	Val 285
Ser	Tyr	His	Thr	Val 290	Ala	Trp	Ser	Asn	Gly 295	Arg	Gly	Phe	Asn	Ala 300
Thr	Tyr	His	Val	Arg 305	Gly	Tyr	Cys	Leu	Pro 310	Trp	Asp	Arg	Pro	Cys 315
Gly	Leu	Gly	Ser	Gly 320	Leu	Gly	Ala	Gly	Glu 325	Gly	Leu	Gly	Glu	Arg 330
Суз	Tyr	Ser	Glu	Ala 335	Gln	Arg	Cys	Asp	Gly 340	Ser	Trp	Asp	Cys	Ala 345
Asp	Gly	Thr	Asp	Glu 350	Glu	Asp	Cys	Pro	Gly 355	Cys	Pro	Pro	Gly	His 360
Phe	Pro	Cys	Gly	Ala 365	Ala	Gly	Thr	Ser	Gly 370	Ala	Thr	Ala	Cys	Tyr 375
Leu	Pro	Ala	Asp	Arg 380	Cys	Asn	Tyr	Gln	Thr 385	Phe	Cys	Ala	Asp	Gly 390
Ala	Asp	Glu	Arg	Arg 395	Cys	Arg	His	Cys	Gln 400	Pro	Gly	Asn	Phe	Arg 405
Cys	Arg	Asp	Glu	Lys 410	Cys	Val	Tyr	Glu	Thr 415	Trp	Val	Cys	Asp	Gly 420
Gln	Pro	Asp	Cys	Ala 425	Asp	Gly	Ser	Asp	Glu 430	Trp	Asp	Cys	Ser	Tyr 435
Val	Leu	Pro	Arg	Lys 440	Val	Ile	Thr	Ala	Ala 445	Val	Ile	Gly	Ser	Leu 450
Val	Cys	Gly	Leu	Leu 455	Leu	Val	Ile	Ala	Leu 460	Gly	Cys	Thr	Cys	Lys

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Leu Tyr Ala Ile Arg Thr Gln Glu Tyr Ser Ile Phe Ala Pro Leu
 Ser Arg Met Glu Ala Glu Ile Val Gln Gln Ala Pro Pro Ser
 Tyr Gly Gln Leu Ile Ala Gln Gly Ala Ile Pro Pro Val Glu Asp
                                     505
 Phe Pro Thr Glu Asn Pro Asn Asp Asn Ser Val Leu Gly Asn Leu
                 515
                                     520
 Arg Ser Leu Leu Gln Ile Leu Arg Gln Asp Met Thr Pro Gly Gly
 Gly Pro Gly Ala Arg Arg Arg Gln Arg Gly Arg Leu Met Arg Arg
                                     550
 Leu Val Arg Arg Leu Arg Arg Trp Gly Leu Leu Pro Arg Thr Asn
 Thr Pro Ala Arg Ala Ser Glu Ala Arg Ser Gln Val Thr Pro Ser
                 575
                                                         585
 Ala Ala Pro Leu Glu Ala Leu Asp Gly Gly Thr Gly Pro Ala Arg
 Glu Gly Gly Ala Val Gly Gly Gln Asp Gly Glu Gln Ala Pro Pro
 Leu Pro Ile Lys Ala Pro Leu Pro Ser Ala Ser Thr Ser Pro Ala
 Pro Thr Thr Val Pro Glu Ala Pro Gly Pro Leu Pro Ser Leu Pro
 Leu Glu Pro Ser Leu Leu Ser Gly Val Val Gln Ala Leu Arg Gly
Arg Leu Leu Pro Ser Leu Gly Pro Pro Gly Pro Thr Arg Ser Pro
Pro Gly Pro His Thr Ala Val Leu Ala Leu Glu Asp Glu Asp Asp
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Ala Glu Asp Glu Pro Leu Leu Thr
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<220>

<223> Synthetic oligonucleotide probe

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<210> 186
<211> 23
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<223> Synthetic oligonucleotide probe
<400> 186
 agaacatagg agcagtccca ctc 23
<210> 187
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tgcctgctgc tgcacaatct cag 23
<210> 188
<211> 45
<212> DNA
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<211> 663
<212> DNA
<213> Homo sapiens
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gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150
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aataaaacat cgccccttct gcttcagtgt gaaaggccac gtgaagatgc 200
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gcccctgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300
attttcata ctttatatg tactcagact tgatcgatta atgaagtggt 350
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agttggtgga ggggtgtttg cacttgtgac agcagtatgc tgtcttgccg 500
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cagaaaaagc ctgtgcatga aaaaaaagaa gttttgtaat tttatattac 600
tttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650
aaaaaaaaaa aaa 663

<210> 190

<211> 152

<212> PRT

<213> Homo sapiens

<400> 190

Met Asp Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe 1 5 10 15

Ser Val Lys Gly His Val Lys Met Leu Arg Leu Ala Leu Thr Val 20 25 30

Thr Ser Met Thr Phe Phe Ile Ile Ala Gln Ala Pro Glu Pro Tyr
35 40 45

Ile Val Ile Thr Gly Phe Glu Val Thr Val Ile Leu Phe Phe Ile 50 55 60

Leu Leu Tyr Val Leu Arg Leu Asp Arg Leu Met Lys Trp Leu Phe 65 70 75

Trp Pro Leu Leu Asp Ile Ile Asn Ser Leu Val Thr Thr Val Phe 80 85 90

Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr Thr 95 100 105

Leu Thr Val Gly Gly Val Phe Ala Leu Val Thr Ala Val Cys 110 115 120

Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn 125 130 135

Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu 140 145 150

Val Leu

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<213> Homo sapiens
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<221> unsure
<222> 78, 212, 234, 487
<223> unknown base
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 ctgctgctgg gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150
 catcgcccct tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200
 ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250
 aaccatatat tgttatcact ggatttgaag tcaccgttat cttatttttc 300
 atacttttat atgtactcag acttgatcga ttaatgaagt ggttattttg 350
 gcctttgctt gatattatca actcactggt aacaacagta ttcatgctca 400
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 ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495
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<223> Synthetic oligonucleotide probe
<400> 192
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<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 193
cctccaccaa ctgtcaatgt tgtgg 25
<210> 194
<211> 40
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<213> Homo sapien
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cgcggccacg aaccgcgtag ttgcgcccac cccgggaccc gggacccctg 250
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ggaaccccgc actcctacat agacacgtac tttgacacag agaggtctag 500
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gaagagtggt actaccagat agaaattctg aaattggaaa ttggaggcca 950
aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000
acagtggcac cacgctgctg cgcctgcccc agaaggtgtt tgatgcggtg 1050
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gtggaagetg tggcccgcgc atctctgatt ccagaattct ctgatggttt 1100

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<210> 196

<211> 518

<212> PRT

<213> Homo sapien

<400> 196

Met Gly Ala Leu Ala Arg Ala Leu Leu Pro Leu Leu Ala Gln
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Trp Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr 20 25 30

Leu Pro Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro 35 40 45

Thr Pro Gly Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu
50 55 60

Ala Leu Ala Leu Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala 65 70 75

Asn Phe Leu Ala Met Val Asp Asn Leu Gln Gly Asp Ser Gly Arg 80 85 90

Gly Tyr Tyr Leu Glu Met Leu Ile Gly Thr Pro Pro Gln Lys Leu 95 100 105

Gln Ile Leu Val Asp Thr Gly Ser Ser Asn Phe Ala Val Ala Gly Thr Pro His Ser Tyr Ile Asp Thr Tyr Phe Asp Thr Glu Arg Ser 130 Ser Thr Tyr Arg Ser Lys Gly Phe Asp Val Thr Val Lys Tyr Thr 145 Gln Gly Ser Trp Thr Gly Phe Val Gly Glu Asp Leu Val Thr Ile Pro Lys Gly Phe Asn Thr Ser Phe Leu Val Asn Ile Ala Thr Ile 170 Phe Glu Ser Glu Asn Phe Phe Leu Pro Gly Ile Lys Trp Asn Gly Ile Leu Gly Leu Ala Tyr Ala Thr Leu Ala Lys Pro Ser Ser Ser Leu Glu Thr Phe Phe Asp Ser Leu Val Thr Gln Ala Asn Ile Pro 220 225 Asn Val Phe Ser Met Gln Met Cys Gly Ala Gly Leu Pro Val Ala Gly Ser Gly Thr Asn Gly Gly Ser Leu Val Leu Gly Gly Ile Glu 255 Pro Ser Leu Tyr Lys Gly Asp Ile Trp Tyr Thr Pro Ile Lys Glu Glu Trp Tyr Tyr Gln Ile Glu Ile Leu Lys Leu Glu Ile Gly Gly 285 Gln Ser Leu Asn Leu Asp Cys Arg Glu Tyr Asn Ala Asp Lys Ala Ile Val Asp Ser Gly Thr Thr Leu Leu Arg Leu Pro Gln Lys Val 310 315 Phe Asp Ala Val Val Glu Ala Val Ala Arg Ala Ser Leu Ile Pro 330 Glu Phe Ser Asp Gly Phe Trp Thr Gly Ser Gln Leu Ala Cys Trp 335 345 Thr Asn Ser Glu Thr Pro Trp Ser Tyr Phe Pro Lys Ile Ser Ile 360 Tyr Leu Arg Asp Glu Asn Ser Ser Arg Ser Phe Arg Ile Thr Ile 365 375 Leu Pro Gln Leu Tyr Ile Gln Pro Met Met Gly Ala Gly Leu Asn Tyr Glu Cys Tyr Arg Phe Gly Ile Ser Pro Ser Thr Asn Ala Leu

395 400 405 Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr Val Ile Phe Asp 410 Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro Cys Ala Glu Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe Ser Thr Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser Glu Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly 470 475 Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Pro Phe Arg 485 Cys Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser 500 Ser Leu Val Arg His Arg Trp Lys 515 <210> 197 <211> 21 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 197 cgcagaagct acagattctc g 21 <210> 198 <211> 19 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 198 ggaaattgga ggccaaagc 19 <210> 199 <211> 20 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 199 ggatgtagcc agcaactgtg 20

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<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 200
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<210> 201
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 201
 ggtcctgtgc ctggatgg 18
<210> 202
<211> 22
<212> DNA
<213> Artificial Sequence
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<400> 202
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<400> 203
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<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
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<210> 206

<211> 377

<212> PRT

<213> Homo sapiens

<400> 206

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Val Leu Val Tyr Tyr Asn Leu Val Lys Ala Pro Pro Cys Gly Gly
20 25 30

Met Gly Asn Leu Arg Gly Arg Thr Ala Val Val Thr Gly Ala Asn 35 40 45

Ser Gly Ile Gly Lys Met Thr Ala Leu Glu Leu Ala Arg Arg Gly 50 55 60

Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg Gly Glu Ala 65 70 75

Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu Val Ile 80 85 90

Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala Phe 95 100 105

Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile 110 115 120

His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe 125 130 135

Asn Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr 140 145 150

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Val Val Val Ala Ser Ala Ala His Cys Arg Gly Arg Leu Asp Phe
Lys Arg Leu Asp Arg Pro Val Val Gly Trp Arg Gln Glu Leu Arg
Ala Tyr Ala Asp Thr Lys Leu Ala Asn Val Leu Phe Ala Arg Glu
                                     205
Leu Ala Asn Gln Leu Glu Ala Thr Gly Val Thr Cys Tyr Ala Ala
His Pro Gly Pro Val Asn Ser Glu Leu Phe Leu Arg His Val Pro
                230
Gly Trp Leu Arg Pro Leu Leu Arg Pro Leu Ala Trp Leu Val Leu
Arg Ala Pro Arg Gly Gly Ala Gln Thr Pro Leu Tyr Cys Ala Leu
                                                         270
Gln Glu Gly Ile Glu Pro Leu Ser Gly Arg Tyr Phe Ala Asn Cys
                275
His Val Glu Glu Val Pro Pro Ala Ala Arg Asp Asp Arg Ala Ala
                290
His Arg Leu Trp Glu Ala Ser Lys Arg Leu Ala Gly Leu Gly Pro
Gly Glu Asp Ala Glu Pro Asp Glu Asp Pro Gln Ser Glu Asp Ser
                320
                                                         330
Glu Ala Pro Ser Ser Leu Ser Thr Pro His Pro Glu Glu Pro Thr
                335
Val Ser Gln Pro Tyr Pro Ser Pro Gln Ser Ser Pro Asp Leu Ser
                350
Lys Met Thr His Arg Ile Gln Ala Lys Val Glu Pro Glu Ile Gln
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Leu Ser

<210> 207

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 207

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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 208
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<210> 209
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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
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<211> 3716
<212> DNA
<213> Homo sapiens
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 acccccagga ccagetgttc cagggccctg gccctgccag gatgagctgc 150
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- Asn Gly Gln Pro Leu Ser Met Val Pro Pro Asp Pro His His Leu
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- Leu Pro Asp Gly Thr Leu Leu Leu Gln Pro Pro Ala Arg Gly 65 70 75
- His Ala His Asp Gly Gln Ala Leu Ser Thr Asp Leu Gly Val Tyr 80 85 90
- Thr Cys Glu Ala Ser Asn Arg Leu Gly Thr Ala Val Ser Arg Gly $95 \hspace{1cm} 100 \hspace{1cm} 105 \hspace{1cm}$
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- Pro Arg Asp Met Val Ala Val Val Gly Glu Gln Phe Thr Leu Glu 125 130 135
- Cys Gly Pro Pro Trp Gly His Pro Glu Pro Thr Val Ser Trp Trp 140 145 150
- Lys Asp Gly Lys Pro Leu Ala Leu Gln Pro Gly Arg His Thr Val 155 160 165
- Ser Gly Gly Ser Leu Leu Met Ala Arg Ala Glu Lys Ser Asp Glu 170 175 180
- Gly Thr Tyr Met Cys Val Ala Thr Asn Ser Ala Gly His Arg Glu 185 190 195
- Ser Arg Ala Ala Arg Val Ser Ile Gln Glu Pro Gln Asp Tyr Thr 200 205 210
- Glu Pro Val Glu Leu Leu Ala Val Arg Ile Gln Leu Glu Asn Val 215 220 225
- Thr Leu Leu Asn Pro Asp Pro Ala Glu Gly Pro Lys Pro Arg Pro 230 235 240

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Pro	Pro	Gln	Leu	Ala 590	Gln	Leu	Ser	Ser	Pro 595	Cys	Ser	Ser	Ser	Asp 600
Ser	Leu	Cys	Ser	Arg 605	Arg	Gly	Leu	Ser	Ser 610	Pro	Arg	Leu	Ser	Leu 615
Ala	Pro	Ala	Glu	Ala 620	Trp	Lys	Ala	Lys	Lys 625	Lys	Gln	Glu	Leu	Gln 630
His	Ala	Asn	Ser	Ser 635	Pro	Leu	Leu	Arg	Gly 640	Ser	His	Ser	Leu	Glu 645
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Gln	Ser	Pro	Gly	Ala 665	Val	Pro	Gln	Ala	Leu 670	Val	Ala	Trp	Arg	Ala 675
Leu	Gly	Pro	Lys	Leu 680	Leu	Ser	Ser	Ser	Asn 685	Glu	Leu	Val	Thr	Arg 690
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His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
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Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met
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Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu 80 85 90

Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr 95 100 105

Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile 110 115 120

Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser 125 130 135

Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala 140 145 150

Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu 155 160 165

Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu 170 175 180

Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr 185 190 195

Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro

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	Leu	Ser	Leu	Leu	Ser 260	Ala	Ala	Gly	Leu	Ile 265	Ala	Phe	Cys	Ser	His 270
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 Leu Asp Tyr Glu Ala Asp Gly Ser Thr Asn Asn Gly Ile Phe Gln
 Ile Asn Ser Arg Arg Trp Cys Ser Asn Leu Thr Pro Asn Val Pro
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Leu Lys Gly Leu Ile Gln Arg Gln Val Gln Met Cys Lys Arg Asn 50 55 60

Leu Glu Val Met Asp Ser Val Arg Arg Gly Ala Gln Leu Ala Ile
65 70 75

Glu Glu Cys Gln Tyr Gln Phe Arg Asn Arg Arg Trp Asn Cys Ser

Thr Leu Asp Ser Leu Pro Val Phe Gly Lys Val Val Thr Gln Gly
95 100 105

Thr Arg Glu Ala Ala Phe Val Tyr Ala Ile Ser Ser Ala Gly Val 110 115 120

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Ala Phe Ala Val Thr Arg Ala Cys Ser Ser Gly Glu Leu Glu Lys
Cys Gly Cys Asp Arg Thr Val His Gly Val Ser Pro Gln Gly Phe
Gln Trp Ser Gly Cys Ser Asp Asn Ile Ala Tyr Gly Val Ala Phe
Ser Gln Ser Phe Val Asp Val Arg Glu Arg Ser Lys Gly Ala Ser
                170
Ser Ser Arg Ala Leu Met Asn Leu His Asn Asn Glu Ala Gly Arg
Lys Ala Ile Leu Thr His Met Arg Val Glu Cys Lys Cys His Gly
                                                         210
Val Ser Gly Ser Cys Glu Val Lys Thr Cys Trp Arg Ala Val Pro
Pro Phe Arg Gln Val Gly His Ala Leu Lys Glu Lys Phe Asp Gly
                230
Ala Thr Glu Val Glu Pro Arg Arg Val Gly Ser Ser Arg Ala Leu
Val Pro Arg Asn Ala Gln Phe Lys Pro His Thr Asp Glu Asp Leu
Val Tyr Leu Glu Pro Ser Pro Asp Phe Cys Glu Gln Asp Met Arg
Ser Gly Val Leu Gly Thr Arg Gly Arg Thr Cys Asn Lys Thr Ser
Lys Ala Ile Asp Gly Cys Glu Leu Leu Cys Cys Gly Arg Gly Phe
His Thr Ala Gln Val Glu Leu Ala Glu Arg Cys Ser Cys Lys Phe
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His Trp Cys Cys Phe Val Lys Cys Arg Gln Cys Gln Arg Leu Val
Glu Leu His Thr Cys Arg
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<210> 227

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 227

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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 228
 tggtgggaga ctgtttaaat tatcggcc 28
<210> 229
<211> 41
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 229
 tgcttcgtca agtgccggca gtgccagcgg ctcgtggagt t 41
<210> 230
<211> 1355
<212> DNA
<213> Homo sapiens
<400> 230
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gctccgagga ggtccccgga gggccctggg gacgctgggt gcactggagc 150
aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200
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cgcaggcgaa gctgatggag caggagagcg ccctgcggga actgcgtgag 450
cgcgtgaccc agggcttggc tgaagccggc aggggccgtg aggacgtccg 500
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tgccagcgcg cacctggtga tcgttggggg cctggatgag cagggcttcc 700
tcactcggaa cacgcgtggc cgtggttact ggctgggcct gagggctgtg 750
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cagectactag geaaggttea gggetaceag tgggtggaeg gagtetetet 800 cagetteage cactggaace agggagagee caatgaeget tgggggegeg 850 agaactgtgt catgatgetg cacacgggge tgtggaacga egeacegtgt 900 gacagegaga aggaeggetg gatetgtgag aaaaggeaca actgetgaee 950 cegeceagtg eeetggagee gegeecattg eageatgteg tateetgggg 1000 getgeteace teeetggete etggagetga ttgeeaaaga gttttttet 1050 teeteateea eegetgetga gteteagaaa eacttggeee aacatageee 1100 tgteeageee agtgeetggg etetgggaee teeatgeega eeteateeta 1150 acteeageee eegggatat geeteeactt eteeteetaa eeaggttag 1250 gtgaetgag actggagetg tttggttte tegeattte eaceaaactg 1300 gaagetgtt ttgeageetg aggaageate aataaatat tgagaaatga 1350 aaaaa 1355

<210> 231

<211> 293

<212> PRT

<213> Homo sapiens

<400> 231

Met Asp Thr Thr Arg Tyr Ser Lys Trp Gly Gly Ser Ser Glu Glu 1 5 10

Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg 20 25 30

Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp 35 40 45

Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg
50 55 60

Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser 65 70 75

Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp 80 85 90

Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr 95 100 105

Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Gln Glu
110 115 120

Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala 125 130 135

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Glu Ala Gly Arg Gly Arg Glu Asp Val Arg Thr Glu Leu Phe Arg
 Ala Leu Glu Ala Val Arg Leu Gln Asn Asn Ser Cys Glu Pro Cys
 Pro Thr Ser Trp Leu Ser Phe Glu Gly Ser Cys Tyr Phe Phe Ser
 Val Pro Lys Thr Trp Ala Ala Ala Gln Asp His Cys Ala Asp
                 185
                                      190
 Ala Ser Ala His Leu Val Ile Val Gly Gly Leu Asp Glu Gln Gly
 Phe Leu Thr Arg Asn Thr Arg Gly Arg Gly Tyr Trp Leu Gly Leu
                 215
 Arg Ala Val Arg His Leu Gly Lys Val Gln Gly Tyr Gln Trp Val
                 230
 Asp Gly Val Ser Leu Ser Phe Ser His Trp Asn Gln Gly Glu Pro
 Asn Asp Ala Trp Gly Arg Glu Asn Cys Val Met Met Leu His Thr
 Gly Leu Trp Asn Asp Ala Pro Cys Asp Ser Glu Lys Asp Gly Trp
                 275
                                                          285
 Ile Cys Glu Lys Arg His Asn Cys
                 290
<210> 232
<211> 24
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 232
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<210> 233
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 233
gtttctgaga ctcagcagcg gtgg 24
<210> 234
<211> 50
<212> DNA
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 234
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<211> 1847
<212> DNA
<213> Homo sapiens
<400> 235
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cgcccgccgt ccccagcggc accgggcaga cgtcggcgga gctggaggtg 700
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cgactggttc gtgggcgtgg acagcctgga cctgtgcgac ggggaccgtt 800
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ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950
actaccegeg getgaaggee etgeeteeca tegeeagggt gacactgetg 1000
cggctgcgac agagccccag ggccttcatc cctcccgccc cagtcctgcc 1050
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cagcagggac aatgagattg tagacagcgc ctcagttcca gaaacgccgc 1100

<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

Met Glu Asn Pro Ser Pro Ala Ala Ala Leu Gly Lys Ala Leu Cys 1 5 10 15

Ala Leu Leu Ala Thr Leu Gly Ala Ala Gly Gln Pro Leu Gly
20 25 30

Gly Glu Ser Ile Cys Ser Ala Arg Ala Pro Ala Lys Tyr Ser Ile
35 40 45

Thr Phe Thr Gly Lys Trp Ser Gln Thr Ala Phe Pro Lys Gln Tyr 50 55 60

Pro Leu Phe Arg Pro Pro Ala Gln Trp Ser Ser Leu Leu Gly Ala 65 70 75

Ala His Ser Ser Asp Tyr Ser Met Trp Arg Lys Asn Gln Tyr Val 80 85 90

Ser Asn Gly Leu Arg Asp Phe Ala Glu Arg Gly Glu Ala Trp Ala 95 100 105

Leu Met Lys Glu Ile Glu Ala Ala Gly Glu Ala Leu Gln Ser Val

110 115 120 His Glu Val Phe Ser Ala Pro Ala Val Pro Ser Gly Thr Gly Gln Thr Ser Ala Glu Leu Glu Val Gln Arg Arg His Ser Leu Val Ser 140 Phe Val Val Arg Ile Val Pro Ser Pro Asp Trp Phe Val Gly Val 155 Asp Ser Leu Asp Leu Cys Asp Gly Asp Arg Trp Arg Glu Gln Ala Ala Leu Asp Leu Tyr Pro Tyr Asp Ala Gly Thr Asp Ser Gly Phe Thr Phe Ser Ser Pro Asn Phe Ala Thr Ile Pro Gln Asp Thr Val 200 Thr Glu Ile Thr Ser Ser Ser Pro Ser His Pro Ala Asn Ser Phe 215 Tyr Tyr Pro Arg Leu Lys Ala Leu Pro Pro Ile Ala Arg Val Thr 230 Leu Leu Arg Leu Arg Gln Ser Pro Arg Ala Phe Ile Pro Pro Ala Pro Val Leu Pro Ser Arg Asp Asn Glu Ile Val Asp Ser Ala Ser Val Pro Glu Thr Pro Leu Asp Cys Glu Val Ser Leu Trp Ser Ser Trp Gly Leu Cys Gly Gly His Cys Gly Arg Leu Gly Thr Lys Ser Arg Thr Arg Tyr Val Arg Val Gln Pro Ala Asn Asn Gly Ser Pro 310 Cys Pro Glu Leu Glu Glu Glu Ala Glu Cys Val Pro Asp Asn Cys 330 Val <210> 237 <211> 22 <212> DNA <213> Artificial Sequence

<223> Synthetic oligonucleotide probe

<400> 237

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<210> 238
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 238
 caggactcgc tacgtccg 18
<210> 239
<211> 24
<212> DNA
<213> Artificial Sequence
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<400> 239
 cagoccotto toctoottto toco 24
<210> 240
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<212> DNA
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gcagttatca gggacgcact cagcc 25
<210> 241
<211> 18
<212> DNA
<213> Artificial Sequence
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ccagcgagag gcagatag 18
<210> 242
<211> 23
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 242
cggtcaccgt gtcctgcggg atg 23
<210> 243
<211> 42
<212> DNA
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 243
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<211> 1894
<212> DNA
<213> Homo sapiens
<400> 244
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aggaagagtg tactcgtagg cggacagctt tagtggccgg ccggccgctc 150
tcatcccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200
tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca 250
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg 300
cagaaatttt atccaacttt gtttggaagc ttattatgac aataccattt 350
ttcatagagt tgtgcctggt ttcatagtcc aaggcggaga tcctactggc 400
acagggagtg gtggagagtc tatctatgga gcgccattca aagatgaatt 450
tcattcacgg ttgcgtttta atcggagagg actggttgcc atggcaaatg 500
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gatgaactta acaataagca taccatcttt ggaaaggtta caggggatac 600
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ggatgatcca catctcagtt ctgttccagt tgtagaaagt gaaaaaggtg 950
atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050
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aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100

aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150 agacaattaa aacgggaact cttagcagca aaacaaaaaa aagtagaaaa 1200 tgcagcaaaa caagcagaaa aaagaagtga agaggaagaa gcccctccag 1250 atggtgctgt tgccgaatac agaagagaaa agcaaaagta tgaagctttg 1300 aggaagcaac agtcaaagaa gggaacttcc cgggaagatc agacccttgc 1350 actgctgaac cagtttaaat ctaaactcac tcaagcaatt gctgaaacac 1400 ctgaaaatga cattcctgaa acagaagtag aagatgatga aggatggatg 1450 tcacatgtac ttcagtttga ggataaaagc agaaaagtga aagatgcaag 1500 catgcaagac tcagatacat ttgaaatcta tgatcctcgg aatccagtga 1550 ataaaagaag gagggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 1600 agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct 1650 acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt 1700 gaaaagaagt atttttgaac ctgttgtctg gttttgaaaa acaattatct 1750 tgttttgcaa attgtggaat gatgtaagca aatgcttttg gttactggta 1800 catgtgtttt ttcctagctg accttttata ttgctaaatc tgaaataaaa 1850

<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

Met Ser Asn Ile Tyr Ile Gln Glu Pro Pro Thr Asn Gly Lys Val 1 5 10 15

Leu Leu Lys Thr Thr Ala Gly Asp Ile Asp Ile Glu Leu Trp Ser 20 25 30

Lys Glu Ala Pro Lys Ala Cys Arg Asn Phe Ile Gln Leu Cys Leu
35 40 45

Glu Ala Tyr Tyr Asp Asn Thr Ile Phe His Arg Val Val Pro Gly
50 55 60

Phe Ile Val Gln Gly Gly Asp Pro Thr Gly Thr Gly Ser Gly Gly 65

Glu Ser Ile Tyr Gly Ala Pro Phe Lys Asp Glu Phe His Ser Arg 80 85 90

Leu Arg Phe Asn Arg Arg Gly Leu Val Ala Met Ala Asn Ala Gly
95 100 105

Ser	His	Asp	Asn	Gly 110		Gln	Phe	Phe	Phe 115		Leu	Gly	Arg	Ala 120
Asp	Glu	Leu	Asn	Asn 125	Lys	His	Thr	Ile	Phe 130		Lys	Val	Thr	Gly 135
Asp	Thr	Val	Tyr	Asn 140		Leu	Arg	Leu	Ser 145		Val	Asp	Ile	Asp 150
Asp	Asp	Glu	Arg	Pro 155	His	Asn	Pro	His	Lys 160		Lys	Ser	Cys	Glu 165
Val	Leu	Phe	Asn	Pro 170	Phe	Asp	Asp	Ile	Ile 175	Pro	Arg	Glu	Ile	Lys 180
Arg	Leu	Lys	Lys	Glu 185	Lys	Pro	Glu	Glu	Glu 190	Val	Lys	Lys	Leu	Lys 195
Pro	Lys	Gly	Thr	Lys 200	Asn	Phe	Ser	Leu	Leu 205	Ser	Phe	Gly	Glu	Glu 210
Ala	Glu	Glu	Glu	Glu 215	Glu	Glu	Val	Asn	Arg 220	۷al	Ser	Gln	Ser	Met 225
Lys	Gly	Lys	Ser	Lys 230	Ser	Ser	His	Asp	Leu 235	Leu	Lys	Asp	Asp	Pro 240
His	Leu	Ser	Ser	Val 245	Pro	Val	Val	Glu	Ser 250	Glu	Lys	Gly	Asp	Ala 255
Pro	Asp	Leu	Val	Asp 260	Asp	Gly	Glu	Asp	Glu 265	Ser	Ala	Glu	His	Asp 270
Glu	Tyr	Ile	Asp	Gly 275	Asp	Glu	Lys	Asn	Leu 280	Met	Arg	Glu	Arg	Ile 285
Ala	Lys	Lys	Leu	Lys 290	Lys	Asp	Thr	Ser	Ala 295	Asn	Val	Lys	Ser	Ala 300
Gly	Glu	Gly	Glu	Val 305	Glu	Lys	Lys	Ser	Val 310	Ser	Arg	Ser	Glu	Glu 315
Leu	Arg	Lys	Glu	Ala 320	Arg	Gln	Leu	Lys	Arg 325	Glu	Leu	Leu	Ala	Ala 330
Lys	Gln	Lys	Lys	Val 335	Glu	Asn	Ala	Ala	Lys 340	Gln	Ala	Glu	Lys	Arg 345
Ser	Glu	Glu	Glu	Glu 350	Ala	Pro	Pro	Asp	Gly 355	Ala	Val	Ala	Glu	Tyr 360
Arg	Arg	Glu	Lys	Gln 365	Lys	Tyr	Glu	Ala	Leu 370	Arg	Lys	Gln	Gln	Ser 375
Lys	Lys	Gly	Thr	Ser 380	Arg	Glu	Asp	Gln	Thr 385	Leu	Ala	Leu	Leu	Asn 390
Gln	Phe	Lys	Ser	Lys	Leu	Thr	Gln	Ala	Ile	Ala	Glu	Thr	Pro	Glu

395 400 405 Asn Asp Ile Pro Glu Thr Glu Val Glu Asp Asp Glu Gly Trp Met Ser His Val Leu Gln Phe Glu Asp Lys Ser Arg Lys Val Lys Asp 430 Ala Ser Met Gln Asp Ser Asp Thr Phe Glu Ile Tyr Asp Pro Arg 440 Asn Pro Val Asn Lys Arg Arg Glu Glu Ser Lys Lys Leu Met Arg Glu Lys Lys Glu Arg Arg 470 <210> 246 <211> 24 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 246 tgcggagatc ctactggcac aggg 24 <210> 247 <211> 18 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 247 cgagttagtc agagcatq 18 <210> 248 <211> 18 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 248 cagatggtgc tgttgccg 18 <210> 249 <211> 29 <212> DNA <213> Artificial Sequence <220>

<223> Synthetic oligonucleotide probe

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<220>
<223> Synthetic oligonucleotide probe
<400> 251
 cctctccgat taaaacgc 18
<210> 252
<211> 45
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 252
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<210> 253
<211> 2456
<212> DNA
<213> Homo sapiens
<400> 253
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catttegeet tgetgaegge gtegageeet ggeeagaeat gteeaeaggg 150
tteteetteg ggteegggae tetgggetee accaeegtgg eegeeggegg 200
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<210> 254

<211> 545

<212> PRT

<213> Homo sapiens

<400> 254

Met Ser Thr Gly Phe Ser Phe Gly Ser Gly Thr Leu Gly Ser Thr 1 5 10 15

Thr Val Ala Ala Gly Gly Thr Ser Thr Gly Gly Val Phe Ser Phe 20 25 30

Gly Thr Gly Thr Ser Ser Asn Pro Ser Val Gly Leu Asn Phe Gly 35 40 45

Asn Leu Gly Ser Thr Ser Thr Pro Ala Thr Thr Ser Ala Pro Ser 50 55 60

Ser Gly Phe Gly Thr Gly Leu Phe Gly Ser Lys Pro Ala Thr Gly 65 70 75

Phe Thr Leu Gly Gly Thr Asn Thr Gly Ala Leu His Thr Lys Arg 80 85 90

Pro Gln Val Val Thr Lys Tyr Gly Thr Leu Gln Gly Lys Gln Met 95 100 105

His Val Gly Lys Thr Pro Ile Gln Val Phe Leu Gly Val Pro Phe
110 115 120

Ser Arg Pro Pro Leu Gly Ile Leu Arg Phe Ala Pro Pro Glu Pro 125 130 135

Pro Glu Pro Trp Lys Gly Ile Arg Asp Ala Thr Thr Tyr Pro Pro Gly Trp Ser Leu Ala Leu Ser Pro Gly Trp Ser Ala Val Ala Arg Ser Arg Leu Thr Ala Thr Ser Ala Ser Arg Val Gln Ala Ser Leu Leu Pro Gln Pro Leu Ser Val Trp Gly Tyr Arg Cys Leu Gln Glu Ser Trp Gly Gln Leu Ala Ser Met Tyr Val Ser Thr Arg Glu Arg Tyr Lys Trp Leu Arg Phe Ser Glu Asp Cys Leu Tyr Leu Asn Val 215 225 Tyr Ala Pro Ala Arg Ala Pro Gly Asp Pro Gln Leu Pro Val Met 230 Val Trp Phe Pro Gly Gly Ala Phe Ile Val Gly Ala Ala Ser Ser Tyr Glu Gly Ser Asp Leu Ala Ala Arg Glu Lys Val Val Leu Val Phe Leu Gln His Arg Leu Gly Ile Phe Gly Phe Leu Ser Thr Asp Asp Ser His Ala Arg Gly Asn Trp Gly Leu Leu Asp Gln Met Ala Ala Leu Arg Trp Val Gln Glu Asn Ile Ala Ala Phe Gly Gly Asp 305 315 Pro Gly Asn Val Thr Leu Phe Gly Gln Ser Ala Gly Ala Met Ser Ile Ser Gly Leu Met Met Ser Pro Leu Ala Ser Gly Leu Phe His 335 345 Arg Ala Ile Ser Gln Ser Gly Thr Ala Leu Phe Arg Leu Phe Ile Thr Ser Asn Pro Leu Lys Val Ala Lys Lys Val Ala His Leu Ala 370 Gly Cys Asn His Asn Ser Thr Gln Ile Leu Val Asn Cys Leu Arg Ala Leu Ser Gly Thr Lys Val Met Arg Val Ser Asn Lys Met Arg Phe Leu Gln Leu Asn Phe Gln Arg Asp Pro Glu Glu Ile Ile Trp Ser Met Ser Pro Val Val Asp Gly Val Val Ile Pro Asp Asp Pro

425 430 435 Leu Val Leu Leu Thr Gln Gly Lys Val Ser Ser Val Pro Tyr Leu Leu Gly Val Asn Asn Leu Glu Phe Asn Trp Leu Leu Pro Tyr Asn 455 Ile Thr Lys Glu Gln Val Pro Leu Val Val Glu Glu Tyr Leu Asp Asn Val Asn Glu His Asp Trp Lys Met Leu Arg Asn Arg Met Met Asp Ile Val Gln Asp Ala Thr Phe Val Tyr Ala Thr Leu Gln Thr Ala His Tyr His Arg Glu Thr Pro Met Met Gly Ile Cys Pro Ala Gly His Ala Thr Thr Arg Met Lys Ser Thr Cys Ser Trp Ile Leu Pro Gln Glu Trp Ala 545 <210> 255 <211> 23 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 255 aggtgcctgc aggagtcctg ggg 23 <210> 256 <211> 24 <212> DNA <213> Artificial Sequence <223> Synthetic oligonucleotide probe <400> 256 ccacctcagg aagccgaaga tgcc 24 <210> 257 <211> 45 <212> DNA <213> Artificial Sequence <220> <223> Synthetic oligonucleotide probe <400> 257 gaacggtaca agtggctgcg cttcagcgag gactgtctgt acctg 45

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<213> Homo sapiens
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W.

ini.

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<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

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Pro Arg Gln Asp Trp Thr Gly Ser Thr Pro Ala Tyr Gly Tyr Trp
50 55 60

Phe Lys Ala Val Thr Glu Thr Thr Lys Gly Ala Pro Val Ala Thr
65 70 75

Asn His Gln Ser Arg Glu Val Glu Met Ser Thr Arg Gly Arg Phe 80 85 90

Gln Leu Thr Gly Asp Pro Ala Lys Gly Asn Cys Ser Leu Val Ile 95 100 105

Arg Asp Ala Gln Met Gln Asp Glu Ser Gln Tyr Phe Phe Arg Val 110 115 120

Glu Arg Gly Ser Tyr Val Thr Tyr Asn Phe Met Asn Asp Gly Phe 125 130 135

Phe Leu Lys Val Thr Val Leu Ser Phe Thr Pro Arg Pro Gln Asp 140 145 150

His Asn Thr Asp Leu Thr Cys His Val Asp Phe Ser Arg Lys Gly
155 160 165

Val Ser Ala Gln Arg Thr Val Arg Leu Arg Val Ala Tyr Ala Pro 170 175 180

Arg Asp Leu Val Ile Ser Ile Ser Arg Asp Asn Thr Pro Ala Leu 185 190 195

Glu Pro Gln Pro Gln Gly Asn Val Pro Tyr Leu Glu Ala Gln Lys 200 205 210

Gly Gln Phe Leu Arg Leu Leu Cys Ala Ala Asp Ser Gln Pro Pro 215 220 225

Ala Thr Leu Ser Trp Val Leu Gln Asn Arg Val Leu Ser Ser Ser 230 235

His Pro Trp Gly Pro Arg Pro Leu Gly Leu Glu Leu Pro Gly Val 245 250 255

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Leu	Gly	Ser	Gln	Gln 275	Arg	Ala	Leu	Asp	Leu 280	Ser	Val	Gln	Tyr	Pro 285
Pro	Glu	Asn	Leu	Arg 290	Val	Met	Val	Ser	Gln 295	Ala	Asn	Arg	Thr	Val 300
Leu	Glu	Asn	Leu	Gly 305	Asn	Gly	Thr	Ser	Leu 310	Pro	Val	Leu	Glu	Gly 315
Gln	Ser	Leu	Суз	Leu 320	Val	Cys	Val	Thr	His 325	Ser	Ser	Pro	Pro	Ala 330
Arg	Leu	Ser	Trp	Thr 335	Gln	Arg	Gly	Gln	Val 340	Leu	Ser	Pro	Ser	Gln 345
Pro	Ser	Asp	Pro	Gly 350	Val	Leu	Glu	Leu	Pro 355	Arg	Val	Gln	Val	Glu 360
His	Glu	Gly	Glu	Phe 365	Thr	Cys	His	Ala	Arg 370	His	Pro	Leu	Gly	Ser 375
Gln	His	Val	Ser	Leu 380	Ser	Leu	Ser	Val	His 385	Tyr	Lys	Lys	Gly	Leu 390
Ile	Ser	Thr	Ala	Phe 395	Ser	Asn	Gly	Ala	Phe 400	Leu	Gly	Ile	Gly	Ile 405
Thr	Ala	Leu	Leu	Phe 410	Leu	Cys	Leu	Ala	Leu 415	Ile	Ile	Met	Lys	Ile 420
Leu	Pro	Lys	Arg	Arg 425	Thr	Gln	Thr	Glu	Thr 430	Pro	Arg	Pro	Arg	Phe 435
Ser	Arg	His	Ser	Thr 440	Ile	Leu	Asp	Tyr	Ile 445	Asn	Val	Val	Pro	Thr 450
Ala	Gly	Pro	Leu	Ala 455	Gln	Lys	Arg	Asn	Gln 460	Lys	Ala	Thr	Pro	Asn 465
Ser	Pro	Arg	Thr	Pro 470	Pro	Pro	Pro	Gly	Ala 475	Pro	Ser	Pro	Glu	Ser 480
				Lys 485					490					495
•				Thr 500					505					510
Glu	Leu	His	Tyr	Ala 515	Thr	Leu	Asn	Phe	Pro 520	Gly	Val	Arg	Pro	Arg 525
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 caacagaaaa ctctcaaaca aagaaagtca agcagccagt gcgatctcat 150
 ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200
 aatgaatacg actagtcatc acatcggcca gctaagatct gatttagaca 250
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<212> PRT

<213> Homo sapiens

<400> 264

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Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp 35 40 45

Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser
50 55 60

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Ile	Ile	Asp	Glu	Arg 95	Thr	Gly	Asp	Ile	Tyr 100	Ala	Ile	Gln	Lys	Leu 105
Asp	Arg	Glu	Glu	Arg 110	Ser	Leu	Tyr	Ile	Leu 115	Arg	Ala	Gln	Val	Ile 120
Asp	Ile	Ala	Thr	Gly 125	Arg	Ala	Val	Glu	Pro 130	Glu	Ser	Glu	Phe	Val 135
Ile	Lys	Val	Ser	Asp 140	Ile	Asn	Asp	Asn	Glu 145	Pro	Lys	Phe	Leu	Asp 150
Glu	Pro	Tyr	Glu	Ala 155	Ile	Val	Pro	Glu	Met 160	Ser	Pro	Glu	Gly	Thr 165
Leu	Val	Ile	Gln	Val 170	Thr	Ala	Ser	Asp	Ala 175	Asp	Asp	Pro	Ser	Ser 180
Gly	Asn	Asn	Ala	Arg 185	Leu	Leu	Tyr	Ser	Leu 190	Leu	Gln	Gly	Gln	Pro 195
Tyr	Phe	Ser	Val	Glu 200	Pro	Thr	Thr	Gly	Val 205	Ile	Arg	Ile	Ser	Ser 210
Lys	Met	Asp	Arg	Glu 215	Leu	Gln	Asp	Glu	Tyr 220	Trp	Val	Ile	Ile	Gln 225
Ala	Lys	Asp	Met	Ile 230	Gly	Gln	Pro	Gly	Ala 235	Leu	Ser	Gly	Thr	Thr 240
Ser	Val	Leu	Ile	Lys 245	Leu	Ser	Asp	Val	Asn 250	Asp	Asn	Lys	Pro	Ile 255
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Gly	Glu	Asn	Ala	Glu 290	Met	Asp	Tyr	Ser	Ile 295	Glu	Glu	Asp	Asp	Ser 300
Gln	Thr	Phe	Asp	Ile 305	Ile	Thr	Asn	His	Glu 310	Thr	Gln	Glu	Gly	Ile 315
Val	Ile	Leu	Lys	Lys 320	Lys	Val	Asp	Phe	Glu 325	His	Gln	Asn	His	Tyr 330
Gly	Ile	Arg	Ala	Lys 335	Val	Lys	Asn	His	His 340	Val	Pro	Glu	Gln	Leu 345
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln

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Val	Glu	Asp	Val	Asp 365	Glu	Pro	Pro	Leu	Phe 370	Leu	Leu	Pro	Tyr	Tyr 375
Val	Phe	Glu	Val	Phe 380	Glu	Glu	Thr	Pro	Gln 385	Gly	Ser	Phe	Val	Gly 390
Val	Val	Ser	Ala	Thr 395	Asp	Pro	Asp	Asn	Arg 400	Lys	Ser	Pro	Ile	Arg 405
Tyr	Ser	Ile	Thr	Arg 410	Ser	Lys	Val	Phe	Asn 415	Ile	Asn	Asp	Asn	Gly 420
Thr	Ile	Thr	Thr	Ser 425	Asn	Ser	Leu	Asp	Arg 430	Glu	Ile	Ser	Ala	Trp 435
Tyr	Asn	Leu	Ser	Ile 440	Thr	Ala	Thr	Glu	Lys 445	Tyr	Asn	Ile	Glu	Gln 450
Ile	Ser	Ser	Ile	Pro 455	Leu	Tyr	Val	Gln	Val 460	Leu	Asn	Ile	Asn	Asp 465
His	Ala	Pro	Glu	Phe 470	Ser	Gln	Tyr	Tyr	Glu 475	Thr	Tyr	Val	Cys	Glu 480
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Arg	Asp	Glu	Ser	Ile 500	Glu	Glu	His	His	Phe 505	Tyr	Phe	Asn	Leu	Ser 510
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Asp	Asn	Thr	Ala	Val 530	Ile	Leu	Thr	Asn	Arg 535	Thr	Gly	Phe	Asn	Leu 540
Gln	Glu	Glu	Pro	Val 545	Phe	Tyr	Ile	Ser	Ile 550	Leu	Ile	Ala	Asp	Asn 555
Gly	Ile	Pro	Ser	Leu 560		Ser	Thr		Thr 565	Leu	Thr	Ile	His	Val 570
Cys	Asp	Cys	Gly	Asp 575	Ser	Gly	Ser	Thr	Gln 580	Thr	Cys	Gln	Tyr	Gln 585
Glu	Leu	Val	Leu	Ser 590	Met	Gly	Phe	Lys	Thr 595	Glu	Val	Ile	Ile	Ala 600
Ile	Leu	Ile	Cys	Ile 605	Met	Ile	Ile	Phe	Gly 610	Phe	Ile	Phe	Leu	Thr 615
Leu	Gly	Leu	Lys	Gln 620	Arg	Arg	Lys	Gln	Ile 625	Leu	Phe	Pro	Glu	Lys 630
Ser	Glu	Asp	Phe	Arg 635	Glu	Asn	Ile	Phe	Gln 640	Tyr	Asp	Asp	Glu	Gly 645

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Ala Glu Ile Arg Ser Leu Tyr Arg Gln Ser Leu Gln Val Gly Pro
                 680
Asp Ser Ala Ile Phe Arg Lys Phe Ile Leu Glu Lys Leu Glu Glu
                 695
Ala Asn Thr Asp Pro Cys Ala Pro Pro Phe Asp Ser Leu Gln Thr
                 710
                                     715
 Tyr Ala Phe Glu Gly Thr Gly Ser Leu Ala Gly Ser Leu Ser Ser
                                                          735
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<223> unknown base

<400> 265

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<212> PRT

<213> Homo sapiens

<400> 270

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Met Tyr Glu Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly 50 55 60

Gln Ile Gln Cys Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser 65 70 75

Thr Leu Gln Ala Thr Arg Ala Leu Met Val Val Gly Ile Leu Leu 80 85

Gly Val Ile Ala Ile Phe Val Ala Thr Val Gly Met Lys Cys Met 95 100 105

Lys Cys Leu Glu Asp Asp Glu Val Gln Lys Met Arg Met Ala Val 110 115 120

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                 155
 Phe Thr Gly Trp Ala Ala Ser Leu Cys Leu Leu Gly Gly Ala
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<222> 21, 69, 163, 434, 436, 444
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<211> 552
<212> DNA
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<212> DNA
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<222> 34, 87, 138, 147, 163, 165-166, 172
<223> unknown base
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<211> 243

<212> PRT

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Lys Leu Gly Asn Pro Thr Asp Arg Asn Val Cys Phe Lys Val Lys 35 40 45

Thr Thr Ala Pro Arg Arg Tyr Cys Val Arg Pro Asn Ser Gly Ile 50 55 60

Ile Asp Ala Gly Ala Ser Ile Asn Val Ser Val Met Leu Gln Pro 65 70 75

Phe Asp Tyr Asp Pro Asn Glu Lys Ser Lys His Lys Phe Met Val $80 \\ 85 \\ 90$

Gln Ser Met Phe Ala Pro Thr Asp Thr Ser Asp Met Glu Ala Val 95 100 105

Trp Lys Glu Ala Lys Pro Glu Asp Leu Met Asp Ser Lys Leu Arg 110 115 120

Cys Val Phe Glu Leu Pro Ala Glu Asn Asp Lys Pro His Asp Val 125 130 135

Glu Ile Asn Lys Ile Ile Ser Thr Thr Ala Ser Lys Thr Glu Thr $140 \,$ $145 \,$ $150 \,$

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<213> Homo sapiens

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<221> unsure

<222> 73, 97

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 attggttcat gtagtgaagt caaactgtta ttcagagatg tttaatgcat 250
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ttggtaggcc ttggtacatg atgctggatt acctctctta aaatgacacc 150
cttcctcgcc tgttggtgct ggcccttggg gagctngagc ccaqcatqct 200
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<211> 27

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<213> Artificial Sequence

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<400> 292

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<212> DNA

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- <211> 413
- <212> PRT
- <213> Homo sapiens
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- Leu Arg Lys Val Pro Arg Ile Val Ser Glu Arg Thr Phe His Leu 35 40 45
- Thr Ser Pro Ala Phe Glu Ala Asp Ala Lys Met Met Val Asn Thr
 50 55 60
- Val Cys Gly Ile Glu Cys Gln Lys Glu Leu Pro Thr Pro Ser Leu 65 70 75
- Ser Glu Leu Glu Asp Tyr Leu Ser Tyr Glu Thr Val Phe Glu Asn 80 85 90
- Gly Thr Arg Thr Leu Thr Arg Val Lys Val Gln Asp Leu Val Leu $95 \hspace{1.5cm} 100 \hspace{1.5cm} 105 \hspace{1.5cm}$
- Glu Pro Thr Gln Asn Ile Thr Thr Lys Gly Val Ser Val Arg Arg 110 115 120
- Lys Arg Gln Val Tyr Gly Thr Asp Ser Arg Phe Ser Ile Leu Asp 125 130 135
- Lys Arg Phe Leu Thr Asn Phe Pro Phe Ser Thr Ala Val Lys Leu 140 145 150
- Ser Thr Gly Cys Ser Gly Ile Leu Ile Ser Pro Gln His Val Leu 155 160 165
- Thr Ala Ala His Cys Val His Asp Gly Lys Asp Tyr Val Lys Gly 170 175 180
- Ser Lys Leu Arg Val Gly Leu Leu Lys Met Arg Asn Lys Ser 185 190 195
- Gly Gly Lys Lys Arg Arg Gly Ser Lys Arg Ser Arg Arg Glu Ala 200 205 210

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Ser Gly Gly Asp Gln Arg Glu Gly Thr Arg Glu His Leu Gln Glu
Arg Ala Lys Gly Gly Arg Arg Lys Lys Ser Gly Arg Gly Gln
Arg Ile Ala Glu Gly Arg Pro Ser Phe Gln Trp Thr Arg Val Lys
Asn Thr His Ile Pro Lys Gly Trp Ala Arg Gly Gly Met Gly Asp
Ala Thr Leu Asp Tyr Asp Tyr Ala Leu Leu Glu Leu Lys Arg Ala
His Lys Lys Lys Tyr Met Glu Leu Gly Ile Ser Pro Thr Ile Lys
Lys Met Pro Gly Gly Met Ile His Phe Ser Gly Phe Asp Asn Asp
Arg Ala Asp Gln Leu Val Tyr Arg Phe Cys Ser Val Ser Asp Glu
Ser Asn Asp Leu Leu Tyr Gln Tyr Cys Asp Ala Glu Ser Gly Ser
Thr Gly Ser Gly Val Tyr Leu Arg Leu Lys Asp Pro Asp Lys Lys
Asn Trp Lys Arg Lys Ile Ile Ala Val Tyr Ser Gly His Gln Trp
Val Asp Val His Gly Val Gln Lys Asp Tyr Asn Val Ala Val Arg
Ile Thr Pro Leu Lys Tyr Ala Gln Ile Cys Leu Trp Ile His Gly
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<211> 24 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<400> 297

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<210> 298

<211> 24

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<400> 298
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<210> 301

<211> 525

<212> PRT

<213> Homo sapiens

<400> 301

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Asp Arg Asp Gly Leu Trp Asp Ala Trp Gly Pro Trp Ser Glu Cys
35
40
45

Ser Arg Thr Cys Gly Gly Gly Ala Ser Tyr Ser Leu Arg Arg Cys 50 55

Leu	Ser	Ser	Lys	Ser 65	Cys	Glu	Gly	Arg	Asn 70		Arg	Tyr	Arg	Thr 75
Суз	Ser	Asn	Val	Asp 80	Cys	Pro	Pro	Glu	Ala 85		Asp	Phe	Arg	Ala 90
Gln	Gln	Cys	Ser	Ala 95	His	Asn	Asp	۷al	Lys 100	His	His	Gly	Gln	Phe 105
Tyr	Glu	Trp	Leu	Pro 110	Val	Ser	Asn	Asp	Pro 115	Asp	Asn	Pro	Суз	Ser 120
Leu	Lys	Cys	Gln	Ala 125	Lys	Gly	Thr	Thr	Leu 130	Val	Val	Glu	Leu	Ala 135
Pro	Lys	Val	Leu	Asp 140	Gly	Thr	Arg	Cys	Tyr 145	Thr	Glu	Ser	Leu	Asp 150
Met	Cys	Ile	Ser	Gly 155	Leu	Cys	Gln	Ile	Val 160	Gly	Cys	Asp	His	Gln 165
Leu	Gly	Ser	Thr	Val 170	Lys	Glu	Asp	Asn	Cys 175	Gly	Val	Cys	Asn	Gly 180
Asp	Gly	Ser	Thr	Cys 185	Arg	Leu	Val	Arg	Gly 190	Gln	Tyr	Lys	Ser	Gln 195
Leu	Ser	Ala	Thr	Lys 200	Ser	Asp	Asp	Thr	Val 205	Val	Ala	Leu	Pro	Tyr 210
Gly	Ser	Arg	His	Ile 215	Arg	Leu	Val	Leu	Lys 220	Gly	Pro	Asp	His	Leu 225
Tyr	Leu	Glu	Thr	Lys 230	Thr	Leu	Gln	Gly	Thr 235	Lys	Gly	Glu	Asn	Ser 240
Leu	Ser	Ser	Thr	Gly 245	Thr	Phe	Leu	Val	Asp 250	Asn	Ser	Ser	Val	Asp 255
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				275					280				Ser	285
Asp	Ser	Thr	Val	Gln 290	Phe	Ile	Phe	Tyr	Gln 295	Pro	Ile	Ile	His	Arg 300
Trp	Arg	Glu	Thr	Asp 305	Phe	Phe	Pro	Cys	Ser 310	Ala	Thr	Cys	Gly	Gly 315
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				335					340				Asn	345
Lys	Pro	Lys	Pro	Lys	Leu	Gln	Glu	Cys	Asn	Leu	Asp	Pro	Cys	Pro

			350					355					360
Ala Ser	Asp	Gly	Tyr 365	Lys	Gln	Ile	Met	Pro 370	Tyr	Asp	Leu	Tyr	His 375
Pro Leu	Pro	Arg	Trp 380	Glu	Ala	Thr	Pro	Trp 385	Thr	Ala	Cys	Ser	Ser 390
Ser Cys	Gly	Gly	Gly 395	Ile	Gln	Ser	Arg	Ala 400	Val	Ser	Cys	Val	Glu 405
Glu Asp	Ile	Gln	Gly 410	His	Val	Thr	Ser	Val 415	Glu	Glu	Trp	Lys	Cys 420
Met Tyr	Thr	Pro	Lys 425	Met	Pro	Ile	Ala	Gln 430	Pro	Суз	Asn	Ile	Phe 435
Asp Cys	Pro	Lys	Trp 440	Leu	Ala	Gln	Glu	Trp 445	Ser	Pro	Cys	Thr	Val 450
Thr Cys	Gly	Gln	Gly 455	Leu	Arg	Tyr	Arg	Val 460	Val	Leu	Cys	Ile	Asp 465
His Arg	Gly	Met	His 470	Thr	Gly	Gly	Cys	Ser 475	Pro	Lys	Thr	Lys	Pro 480
His Ile	Lys	Glu	Glu 485	Cys	Ile	Val	Pro	Thr 490	Pro	Cys	Tyr	Lys	Pro 495
Lys Glu	Lys	Leu	Pro 500	Val	Glu	Ala	Lys	Leu 505	Pro	Trp	Phe	Lys	Gln 510
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<211> 1533

<212> DNA

<213> Homo sapiens

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gctccaggaa gagcctaggc tggatgtctt gatcaataac gcagggatct 500 tccagtgccc ttacatgaag actgaagatg ggtttgagat gcagttcgga 550 gtgaaccatc tggggcactt tctactcacc aatcttctcc ttggactcct 600 caaaagttca gctcccagca ggattgtggt agtttcttcc aaactttata 650 aatacggaga catcaatttt gatgacttga acagtgaaca aagctataat 700 aaaagctttt gttatagccg gagcaaactg gctaacattc tttttaccag 750 ggaactagcc cgccgcttag aaggcacaaa tgtcaccgtc aatgtgttgc 800 atcctggtat tgtacggaca aatctgggga ggcacataca cattccactg 850 ttggtcaaac cactcttcaa tttggtgtca tgggcttttt tcaaaactcc 900 agtagaaggt gcccagactt ccatttattt ggcctcttca cctqaggtag 950 aaggagtgtc aggaagatac tttggggatt gtaaagagga agaactgttg 1000 cccaaagcta tggatgaatc tgttgcaaga aaactctggg atatcagtga 1050 agtgatggtt ggcctgctaa aataggaaca aggagtaaaa gagctgttta 1100 taaaactgca tatcagttat atctgtgatc aggaatggtg tggattgaga 1150 acttgttact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200 ggtacatgtg ggtattttgg agttactgaa aaattatttt tgggataaga 1250 gaatttcagc aaagatgttt taaatatata tagtaagtat aatgaataat 1300 aagtacaatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350 tggatgacat attaatattt gtcagaatta agtgactcaa agtgctatcg 1400 agaggttttt caagtatctt tgagtttcat ggccaaagtg ttaactagtt 1450 ttactacaat gtttggtgtt tgtgtggaaa ttatctgcct ggtgtgtgca 1500 cacaagtctt acttggaata aatttactgg tac 1533

<210> 303

<211> 336

<212> PRT

<213> Homo sapiens

<400> 303

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Arg Leu Arg Arg Gly Gly Asp Pro Gly Leu Met His Gly Lys Thr 35 40 45

Val Leu Ile Thr Gly Ala Asn Ser Gly Leu Gly Arg Ala Thr Ala Ala Glu Leu Leu Arg Leu Gly Ala Arg Val Ile Met Gly Cys Arg Asp Arg Ala Arg Ala Glu Glu Ala Ala Gly Gln Leu Arg Arg Glu Leu Arg Gln Ala Ala Glu Cys Gly Pro Glu Pro Gly Val Ser Gly Val Gly Glu Leu Ile Val Arg Glu Leu Asp Leu Ala Ser Leu Arg 115 Ser Val Arg Ala Phe Cys Gln Glu Met Leu Gln Glu Glu Pro Arg 125 Leu Asp Val Leu Ile Asn Asn Ala Gly Ile Phe Gln Cys Pro Tyr Met Lys Thr Glu Asp Gly Phe Glu Met Gln Phe Gly Val Asn His Leu Gly His Phe Leu Leu Thr Asn Leu Leu Gly Leu Leu Lys Ser Ser Ala Pro Ser Arg Ile Val Val Val Ser Ser Lys Leu Tyr 185 Lys Tyr Gly Asp Ile Asn Phe Asp Asp Leu Asn Ser Glu Gln Ser Tyr Asn Lys Ser Phe Cys Tyr Ser Arg Ser Lys Leu Ala Asn Ile 215 Leu Phe Thr Arg Glu Leu Ala Arg Arg Leu Glu Gly Thr Asn Val Thr Val Asn Val Leu His Pro Gly Ile Val Arg Thr Asn Leu Gly 245 Arg His Ile His Ile Pro Leu Val Lys Pro Leu Phe Asn Leu Val Ser Trp Ala Phe Phe Lys Thr Pro Val Glu Gly Ala Gln Thr Ser Ile Tyr Leu Ala Ser Ser Pro Glu Val Glu Gly Val Ser Gly Arg Tyr Phe Gly Asp Cys Lys Glu Glu Glu Leu Leu Pro Lys Ala Met Asp Glu Ser Val Ala Arg Lys Leu Trp Asp Ile Ser Glu Val 330 Met Val Gly Leu Leu Lys

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 gtgatcagga atggtgtgga ttgagaactt gttacttgaa gaaaaagaat 200
 tttgatattg gaatagcctg ntaagaggna catgtgggta ttttggagtt 250
 actgaaaaat tatttttggg ataagagaat ttcagcaaag atgttttaaa 300
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<210> 305
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 305
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<211> 26
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 306
gcccatgaca ccaaattgaa gagtgg 26
<210> 307
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<210> 309

<211> 406

<212> PRT

<213> Homo sapiens

<400> 309

Met His Pro Ala Val Phe Leu Ser Leu Pro Asp Leu Arg Cys Ser 1 5 10 15

Leu Leu Leu Val Thr Trp Val Phe Thr Pro Val Thr Thr Glu
20 25 30

Ile Thr Ser Leu Ala Thr Glu Asn Ile Asp Glu Ile Leu Asn Asn 35 40 45

Ala Asp Val Ala Leu Val Asn Phe Tyr Ala Asp Trp Cys Arg Phe 50 55 60

Ser Gln Met Leu His Pro Ile Phe Glu Glu Ala Ser Asp Val Ile 65 70 75

Lys Glu Glu Phe Pro Asn Glu Asn Gln Val Val Phe Ala Arg Val 80 85 90

Asp Cys Asp Gln His Ser Asp Ile Ala Gln Arg Tyr Arg Ile Ser 95 100 105

Lys Tyr Pro Thr Leu Lys Leu Phe Arg Asn Gly Met Met Lys 110 115 120

Arg Glu Tyr Arg Gly Gln Arg Ser Val Lys Ala Leu Ala Asp Tyr 125 130 135

Ile Arg Gln Gln Lys Ser Asp Pro Ile Gln Glu Ile Arg Asp Leu 140 145 150

Ala Glu Ile Thr Thr Leu Asp Arg Ser Lys Arg Asn Ile Ile Gly 155 160 165

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Tyr Phe Glu Gln Lys Asp Ser Asp Asn Tyr Arg Val Phe Glu Arg
Val Ala Asn Ile Leu His Asp Asp Cys Ala Phe Leu Ser Ala Phe
Gly Asp Val Ser Lys Pro Glu Arg Tyr Ser Gly Asp Asn Ile Ile
Tyr Lys Pro Pro Gly His Ser Ala Pro Asp Met Val Tyr Leu Gly
Ala Met Thr Asn Phe Asp Val Thr Tyr Asn Trp Ile Gln Asp Lys
Cys Val Pro Leu Val Arg Glu Ile Thr Phe Glu Asn Gly Glu Glu
                245
Leu Thr Glu Glu Gly Leu Pro Phe Leu Ile Leu Phe His Met Lys
Glu Asp Thr Glu Ser Leu Glu Ile Phe Gln Asn Glu Val Ala Arg
Gln Leu Ile Ser Glu Lys Gly Thr Ile Asn Phe Leu His Ala Asp
Cys Asp Lys Phe Arg His Pro Leu Leu His Ile Gln Lys Thr Pro
                305
                                                         315
Ala Asp Cys Pro Val Ile Ala Ile Asp Ser Phe Arg His Met Tyr
Val Phe Gly Asp Phe Lys Asp Val Leu Ile Pro Gly Lys Leu Lys
Gln Phe Val Phe Asp Leu His Ser Gly Lys Leu His Arg Glu Phe
His His Gly Pro Asp Pro Thr Asp Thr Ala Pro Gly Glu Gln Ala
Gln Asp Val Ala Ser Ser Pro Pro Glu Ser Ser Phe Gln Lys Leu
Ala Pro Ser Glu Tyr Arg Tyr Thr Leu Leu Arg Asp Arg Asp Glu
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Leu

<210> 310

<211> 182

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<400> 312

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<223> unknown base
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ttgtgatcag cactctgaca tagcccagag atacaggata agcaaatacc 100
 caaccctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150
ggtcagcgat cagtgaaagc attggcagat ta 182
<210> 311
<211> 598
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 38, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 396
<223> unknown base
<400> 311
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 gagaggacna ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 100
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 ccaqcqcctq tccctqtcnc qqancccaqc gtnaccatqc atcctqccqt 200
 cttcctatcc ttacccgacc tcagatgctc ccttctgctc ctggtaactt 250
 gggtttttac tcctgtaaca actgaaataa cnngtcttga tacnnagaat 300
 atagatgaaa ttttaaacna tgctgatgtg gctttagtca atttttatgc 350
 tgactggtgt cgtttcagtc agatgtggca tccaattttt gaggangctt 400
 ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 450
 agagttgatt gtgatcagca ctctgacata gcccagagat acaggataag 500
 caaataccca accetcaaat tgtttegtaa tgggatgatg atgaagagag 550
 aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggc 598
<210> 312
<211> 22
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
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<210> 313
<211> 19
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 313
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<210> 314
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 314
ccagaatgaa gtagctcggc 20
<210> 315
<211> 20
<212> DNA
<213> Artificial Sequence
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<400> 315
ccgactcaaa atgcattgtc 20
<210> 316
<211> 19
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 316
catttggcag gaattgtcc 19
<210> 317
<211> 18
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 317
ggtgctatag gccaaggg 18
<210> 318
<211> 24
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 318
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<210> 319
<211> 25
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 319
ctacatataa tggcacatgt cagcc 25
<210> 320
<211> 46
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 320
cgtcttccta tccttacccq acctcagatg ctcccttctg ctcctq 46
<210> 321
<211> 1333
<212> DNA
<213> Homo sapiens
<400> 321
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 cgctgctgct cactgccgcg ctcatcttct tcgccatttg gcacattata 100
 gcatttgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150
 taccctgaat ccccttgtac tcccagagta cctcatccac gctttcttct 200
 gtgtcatgtt tctttgtgca gcagagtggc ttacactggg tctcaatatg 250
 cccctcttgg catatcatat ttggaggtat atgagtagac cagtgatgag 300
 tggcccagga ctctatgacc ctacaaccat catgaatgca gatattctag 350
 catattgtca gaaggaagga tggtgcaaat tagcttttta tcttctagca 400
 tttttttact acctatatgg catgatctat gttttggtga gctcttagaa 450
 caacacacag aagaattggt ccagttaagt gcatgcaaaa agccaccaaa 500
 tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550
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tgatcagtta ctttaaaaaa tgactcctta ttttttaaat gtttccacat 600 ttttgcttgt ggaaagactg ttttcatatg ttatactcag ataaagattt 650 taaatggtat tacgtataaa ttaatataaa atgattacct ctggtgttga 700 caggittgaa citgcactic tiaaggaaca gccataatcc tctgaatgat 750 gcattaatta ctgactgtcc tagtacattg gaagcttttg tttataggaa 800 cttgtagggc tcattttggt ttcattgaaa cagtatctaa ttataaatta 850 gctgtagata tcaggtgctt ctgatgaagt gaaaatgtat atctgactag 900 tgggaaactt catgggtttc ctcatctgtc atgtcgatga ttatatatgg 950 atacatttac aaaaataaaa agcgggaatt ttcccttcgc ttgaatatta 1000 tccctgtata ttgcatgaat gagagatttc ccatatttcc atcagagtaa 1050 taaatatact tgctttaatt cttaagcata agtaaacatg atataaaaat 1100 atatgctgaa ttacttgtga agaatgcatt taaagctatt ttaaatgtgt 1150 ttttatttgt aagacattac ttattaagaa attggttatt atgcttactg 1200 ttctaatctg gtggtaaagg tattcttaag aatttgcagg tactacagat 1250 tttcaaaact gaatgagaga aaattgtata accatcctgc tgttccttta 1300 gtgcaataca ataaaactct gaaattaaga ctc 1333

<210> 322

<211> 144

<212> PRT

<213> Homo sapiens

<400> 322

Met Ala Phe Thr Phe Ala Ala Phe Cys Tyr Met Leu Ala Leu Leu 1 5 10 15

Leu Thr Ala Ala Leu Ile Phe Phe Ala Ile Trp His Ile Ile Ala 20 25 30

Phe Asp Glu Leu Lys Thr Asp Tyr Lys Asn Pro Ile Asp Gln Cys 35 40 45

Asn Thr Leu Asn Pro Leu Val Leu Pro Glu Tyr Leu Ile His Ala 50 55 60

Phe Phe Cys Val Met Phe Leu Cys Ala Ala Glu Trp Leu Thr Leu 65 70 75

Gly Leu Asn Met Pro Leu Leu Ala Tyr His Ile Trp Arg Tyr Met $80 \hspace{1cm} 85 \hspace{1cm} 90$

Ser Arg Pro Val Met Ser Gly Pro Gly Leu Tyr Asp Pro Thr Thr $95 \\ 100 \\ 105$

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Ile Met Asn Ala Asp Ile Leu Ala Tyr Cys Gln Lys Glu Gly Trp
                  110
 Cys Lys Leu Ala Phe Tyr Leu Leu Ala Phe Phe Tyr Tyr Leu Tyr
                  125
                                                          135
 Gly Met Ile Tyr Val Leu Val Ser Ser
                 140
<210> 323
<211> 477
<212> DNA
<213> Homo sapiens
<400> 323
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 tgtaataccc tgaatcccct tgtactccca gagtacctca tccacgcttt 100
 cttctgtgtc atgtttcttt gtgcagcaga gtggcttaca ctgggtctca 150
 atatgcccct cttggcatat catatttgga ggtatatgag tagaccagtg 200
 atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250
 tctagcatat tgtcagaagg aaggatggtg caaattagct ttttatcttc 300
 tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350
 tagaacaaca cacagaagaa ttggtccagt taagtgcatg caaaaagcca 400
 ccaaatgaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450
 gaatctgatc agttacttta aaaaatg 477
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<211> 43
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 324
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<210> 325
<211> 41
<212> DNA
<213> Artificial Sequence
<223> Synthetic oligonucleotide probe
<400> 325
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<210> 326
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<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 326
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<210> 327
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 327
actggaccaa ttcttctgtg 20
<210> 328
<211> 45
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 328
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<210> 329
<211> 1174
<212> DNA
<213> Homo sapiens
<400> 329
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 ggacccaact ggggctcccg ccgctgctgc tgctgaccat ggccttggcc 150
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tacggcgtct tgccaccggg cctqtcagtt gacctacccc ttgcacacct 250
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tcaatttgtc agtttgtgga tgatggaatt gacttaaatc gaactaaatt 350
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400
atgettgeca tettggttge cagaateage tgecattege tgaactgaga 450
caagaacaac ttatgtccct gatgccaaaa atgcacctac tctttcctct 500
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aactotggtg aggtcattot ggagtgacat gatggactoc gcacagagot 550 toataacoto ttoatggact tittatotto aagcogatga oggaaaaata 600 gttatattoc agtotaagoo agaaatocag tacgoacoac atttggagoa 650 ggagootaca aatttgagag aatcatotot aagcaaaatg tootatotgo 700 aaatgagaaa ttoacaagog cacaggaatt ttottgaaga tggagaaagt 750 gatggottit taagatgoot ototottaac totgggtgga tittaactac 800 aactottgto ototoggga taggattgot titggattigt tgtgcaactg 850 ttgotacago tgtggagoag tatgttoot ototoggagagot gagtatotat 900 ggtgacttgg agttatgaa tgaacaaaag otaaacagat atccagotto 950 ttotottgg gitgttagat otaaacaga agatcatgaa gaagcagggo 1000 ototacotac aaaagtgaat ottgotoat otgaaatta agcattito 1050 tittaaaaag caagtgtaat agacatotaa aattocacto ototaacag 1100 ttttaaaaag tactcaaatc tgtg 1174

<210> 330

<211> 323

<212> PRT

<213> Homo sapiens

<400> 330

Met Ala Ala Pro Lys Gly Ser Leu Trp Val Arg Thr Gln Leu Gly
1 5 10 15

Leu Pro Pro Leu Leu Leu Thr Met Ala Leu Ala Gly Gly Ser 20 25 30

Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp Thr $35 \hspace{1cm} 40 \hspace{1cm} 45$

Ala Ser Cys His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr 50 55 60

Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg
65 70 75

Leu Phe Ser Ile Cys Gln Phe Val Asp Asp Gly Ile Asp Leu Asn 80 85 90

Arg Thr Lys Leu Glu Cys Glu Ser Ala Cys Thr Glu Ala Tyr Ser 95 100 105

Gln Ser Asp Glu Gln Tyr Ala Cys His Leu Gly Cys Gln Asn Gln 110 115 120

Leu Pro Phe Ala Glu Leu Arg Gln Glu Gln Leu Met Ser Leu Met Pro Lys Met His Leu Leu Phe Pro Leu Thr Leu Val Arg Ser Phe 140 145 150 Trp Ser Asp Met Met Asp Ser Ala Gln Ser Phe Ile Thr Ser Ser 155 Trp Thr Phe Tyr Leu Gln Ala Asp Asp Gly Lys Ile Val Ile Phe 170 Gln Ser Lys Pro Glu Ile Gln Tyr Ala Pro His Leu Glu Gln Glu Pro Thr Asn Leu Arg Glu Ser Ser Leu Ser Lys Met Ser Tyr Leu 200 Gln Met Arg Asn Ser Gln Ala His Arg Asn Phe Leu Glu Asp Gly 215 220 Glu Ser Asp Gly Phe Leu Arg Cys Leu Ser Leu Asn Ser Gly Trp 230 Ile Leu Thr Thr Leu Val Leu Ser Val Met Val Leu Leu Trp 245 250 Ile Cys Cys Ala Thr Val Ala Thr Ala Val Glu Gln Tyr Val Pro 260 Ser Glu Lys Leu Ser Ile Tyr Gly Asp Leu Glu Phe Met Asn Glu 275 280 Gln Lys Leu Asn Arg Tyr Pro Ala Ser Ser Leu Val Val Val Arg 300 Ser Lys Thr Glu Asp His Glu Glu Ala Gly Pro Leu Pro Thr Lys 310 315 Val Asn Leu Ala His Ser Glu Ile

<210> 331

<211> 350

<212> DNA

<213> Homo sapiens

320

<400> 331

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aactgagaca agaacaactt atgtccctga tgccaaaaat gcacctactc 300
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<210> 332
<211> 562
<212> DNA
<213> Homo sapiens
<220>
<221> unsure
<222> 47
<223> unknown base
<400> 332
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 cgaagggagc ctttgggtga ggacccaact ggggctcccg ccgctgctgc 150
 tgctgaccat ggccttggcc ggaggttcgg ggaccgcttc ggctgaagca 200
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 tgccattcgc tgaactgaga caagaacaac ttatgtccct gatgccaaaa 500
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 gatggactcc qc 562
<210> 333
<211> 22
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 333
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<400> 334
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<210> 335
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<212> DNA
<213> Homo sapiens
<400> 336
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agggcgcacg gcccgcgacc gagcgtgcgg actggcctcc caagcqtgqg 150
gcgacaagct gccggagctg caatgggccg cggctgggga ttcttqtttq 200
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ggatgattgt acctgtgatg ttgaaaccat tgatagattt aataactaca 350
ggcttttccc aagactacaa aaacttcttg aaagtgacta ctttaggtat 400
tacaaggtaa acctgaagag gccgtgtcct ttctggaatg acatcagcca 450
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ctcattgaag aatgtgaaca agctgaacga cttggagcag tggatgaatc 600
tctgagtgag gaaacacaga aggctgttct tcagtggacc aagcatgatg 650
attetteaga taacttetgt gaagetgatg acatteagte eeetgaaget 700
gaatatgtag atttgcttct taatcctgag cgctacactg gttacaaggg 750
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aaaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950

tggggacaca acattacaga atttcaacag cgatttgatg gaattttgac 1050 tgaaggagaa ggtccaagaa ggcttaagaa cttgtatttt ctctacttaa 1100 tagaactaag ggctttatcc aaagtgttac cattcttcga gcgcccagat 1150 tttcaactct ttactggaaa taaaattcag gatgaggaaa acaaaatgtt 1200 acttctggaa atacttcatg aaatcaagtc atttcctttg cattttgatg 1250 agaattcatt ttttgctggg gataaaaaag aagcacacaa actaaaggag 1300 gactttcgac tgcattttag aaatatttca agaattatgg attgtgttgg 1350 ttgttttaaa tgtcgtctgt ggggaaagct tcagactcag ggtttgggca 1400 ctgctctgaa gatcttattt tctgagaaat tgatagcaaa tatgccagaa 1450 agtggaccta gttatgaatt ccatctaacc agacaagaaa tagtatcatt 1500 attcaacgca tttggaagaa tttctacaag tgtgaaagaa ttagaaaact 1550 tcaggaactt gttacagaat attcattaaa gaaaacaagc tgatatgtgc 1600 ctgtttctgg acaatggagg cgaaagagtg gaatttcatt caaaggcata 1650 atagcaatga cagtcttaag ccaaacattt tatataaagt tgcttttgta 1700 aaggagaatt atattgtttt aagtaaacac atttttaaaa attgtgttaa 1750 gtctatgtat aatactactg tgagtaaaag taatacttta ataatgtggt 1800 acaaatttta aagtttaata ttgaataaaa ggaggattat caaattaaaa 1850 aaaaaaaaaa aaaaaaaaa aaaaaa 1885

<210> 337

<211> 468

<212> PRT

<213> Homo sapiens

<400> 337

Met Gly Arg Gly Trp Gly Phe Leu Phe Gly Leu Leu Gly Ala Val 1 5 10 15

Trp Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr 20 25 30

Ala Ala Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp 35 40 45

Cys Thr Cys Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg 50 55 60

Leu Phe Pro Arg Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg
65 70 75

Tyr Tyr Lys Val Asn Leu Lys Arg Pro Cys Pro Phe Trp Asn Asp Ile Ser Gln Cys Gly Arg Arg Asp Cys Ala Val Lys Pro Cys Gln Ser Asp Glu Val Pro Asp Gly Ile Lys Ser Ala Ser Tyr Lys Tyr Ser Glu Glu Ala Asn Asn Leu Ile Glu Glu Cys Glu Gln Ala Glu 125 Arg Leu Gly Ala Val Asp Glu Ser Leu Ser Glu Glu Thr Gln Lys Ala Val Leu Gln Trp Thr Lys His Asp Asp Ser Ser Asp Asn Phe Cys Glu Ala Asp Asp Ile Gln Ser Pro Glu Ala Glu Tyr Val Asp Leu Leu Asn Pro Glu Arg Tyr Thr Gly Tyr Lys Gly Pro Asp 185 Ala Trp Lys Ile Trp Asn Val Ile Tyr Glu Glu Asn Cys Phe Lys Pro Gln Thr Ile Lys Arg Pro Leu Asn Pro Leu Ala Ser Gly Gln Gly Thr Ser Glu Glu Asn Thr Phe Tyr Ser Trp Leu Glu Gly Leu Cys Val Glu Lys Arg Ala Phe Tyr Arg Leu Ile Ser Gly Leu His Ala Ser Ile Asn Val His Leu Ser Ala Arg Tyr Leu Leu Gln Glu Thr Trp Leu Glu Lys Lys Trp Gly His Asn Ile Thr Glu Phe Gln Gln Arg Phe Asp Gly Ile Leu Thr Glu Gly Glu Gly Pro Arg Arg Leu Lys Asn Leu Tyr Phe Leu Tyr Leu Ile Glu Leu Arg Ala Leu Ser Lys Val Leu Pro Phe Phe Glu Arg Pro Asp Phe Gln Leu Phe Thr Gly Asn Lys Ile Gln Asp Glu Glu Asn Lys Met Leu Leu 335 Glu Ile Leu His Glu Ile Lys Ser Phe Pro Leu His Phe Asp Glu Asn Ser Phe Phe Ala Gly Asp Lys Lys Glu Ala His Lys Leu Lys

375 365 370 Glu Asp Phe Arg Leu His Phe Arg Asn Ile Ser Arg Ile Met Asp 380 Cys Val Gly Cys Phe Lys Cys Arg Leu Trp Gly Lys Leu Gln Thr 405 Gln Gly Leu Gly Thr Ala Leu Lys Ile Leu Phe Ser Glu Lys Leu Ile Ala Asn Met Pro Glu Ser Gly Pro Ser Tyr Glu Phe His Leu Thr Arg Gln Glu Ile Val Ser Leu Phe Asn Ala Phe Gly Arg Ile 445 Ser Thr Ser Val Lys Glu Leu Glu Asn Phe Arg Asn Leu Leu Gln Asn Ile His <210> 338 <211> 507 <212> DNA <213> Homo sapiens <220> <221> unsure <222> 101, 263, 376, 397, 426 <223> unknown base <400> 338 gctggaaata tggatgtcat ctacgagaaa ctgttttaag ccacagacaa 50 ttaaaagacc tttaaatcct ttggcttctg gtcaagggac aagtgaagag 100 nacacttttt acagttggct agaaggtctc tgtgtagaaa aaagagcatt 150 ctacagactt atatctggcc tacatgcaag cattaatgtg catttgagtg 200 caagatatct tttacaagag acctggttag aaaagaaatg gggacacaac 250 attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300 tccaagaagg cttaagaact tgtattttct ctacttaata gaactaaggg 350 ctttatccaa agtgttacca ttcttngagc gcccagattt tcaactnttt 400 actggaaata aaattcagga tgaggnaaac aaaatgttac ttttggaaat 450 acttcatgaa atcaagtcat ttcctttgca ttttgatgag aattcatttt 500

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Arg Leu Phe Pro Gly Pro Pro Glu Ala Glu Phe Gly Tyr Ser Val 35 40 45

Leu Gln His Val Gly Gly Gln Arg Trp Met Leu Val Gly Ala
50 55 60

Pro Trp Asp Gly Pro Ser Gly Asp Arg Arg Gly Asp Val Tyr Arg 65 70 75

Cys Pro Val Gly Gly Ala His Asn Ala Pro Cys Ala Lys Gly His 80 85 90

Leu Gly Asp Tyr Gln Leu Gly Asn Ser Ser His Pro Ala Val Asn 95 100 105

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Phe Met Val Ser

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<212> DNA

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Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser 35 40 45

Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro 50 55 60

Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu
65 70 75

Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser 80 85 90

Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala
95 100 105

Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln 110 115 120

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His Leu Val Ile Glu Leu Glu Asp Leu Gly Pro Gln Phe Glu Phe
Leu Val Ala Tyr Trp Arg Arg Glu Pro Gly Ala Glu Glu His Val
Lys Met Val Arg Ser Gly Gly Ile Pro Val His Leu Glu Thr Met
Glu Pro Gly Ala Ala Tyr Cys Val Lys Ala Gln Thr Phe Val Lys
Ala Ile Gly Arg Tyr Ser Ala Phe Ser Gln Thr Glu Cys Val Glu
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Val Gln Gly Glu Ala Ile Pro Leu Val Leu Ala Leu Phe Ala Phe
                230
Val Gly Phe Met Leu Ile Leu Val Val Val Pro Leu Phe Val Trp
                245
Lys Met Gly Arg Leu Leu Gln Tyr Ser Cys Cys Pro Val Val
                260
Leu Pro Asp Thr Leu Lys Ile Thr Asn Ser Pro Gln Lys Leu Ile
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- <221> unsure
- <222> 654, 711, 748, 827
- <223> unknown base
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Pro Glu Asp Trp Trp Ser Tyr Lys Asp Asn Leu Gln Gly Asn Phe 35 40 45

Val Pro Gly Pro Pro Phe Trp Gly Leu Val Asn Ala Ala Trp Ser 50 55 60

Leu Cys Ala Val Gly Lys Arg Gln Ser Pro Val Asp Val Glu Leu 65 70 75

Lys Arg Val Leu Tyr Asp Pro Phe Leu Pro Pro Leu Arg Leu Ser 80 85 90

Thr Gly Glu Lys Leu Arg Gly Thr Leu Tyr Asn Thr Gly Arg 95 100 105

His Val Ser Phe Leu Pro Ala Pro Arg Pro Val Val Asn Val Ser 110 115 120

Gly Gly Pro Leu Leu Tyr Ser His Arg Leu Ser Glu Leu Arg Leu 125 130 135

Leu Phe Gly Ala Arg Asp Gly Ala Gly Ser Glu His Gln Ile Asn 140 145 150

His Gln Gly Phe Ser Ala Glu Val Gln Leu Ile His Phe Asn Gln 155 160 165

Glu Leu Tyr Gly Asn Phe Ser Ala Ala Ser Arg Gly Pro Asn Gly

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Pro	Phe	Leu	Ser	Arg 200	Leu	Leu	Asn	Arg	Asp 205	Thr	Ile	Thr	Arg	Ile 210
Ser	Tyr	Lys	Asn	Asp 215	Ala	Tyr	Phe	Leu	Gln 220	Asp	Leu	Ser	Leu	Glu 225
Leu	Leu	Phe	Pro	Glu 230	Ser	Phe	Gly	Phe	Ile 235	Thr	Tyr	Gln	Gly	Ser 240
Leu	Ser	Thr	Pro	Pro 245	Cys	Ser	Glu	Thr	Val 250	Thr	Trp	Ile	Leu	Ile 255
Asp	Arg	Ala	Leu	Asn 260	Ile	Thr	Ser	Leu	Gln 265	Met	His	Ser	Leu	Arg 270
Leu	Leu	Ser	Gln	Asn 275	Pro	Pro	Ser	Gln	Ile 280	Phe	Gln	Ser	Leu	Ser 285
Gly	Asn	Ser	Arg	Pro 290	Leu	Gln	Pro	Leu	Ala 295	His	Arg	Ala	Leu	Arg 300
Gly	Asn	Arg	Asp	Pro 305	Arg	His	Pro	Glu	Arg 310	Arg	Cys	Arg	Gly	Pro 315
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<212> PRT

<213> Homo sapiens

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Leu Leu Glu Lys Leu Glu Lys Tyr Met Asp Glu Asp Gly Glu 35 40 45

Trp Trp Ile Ala Lys Gln Arg Gly Lys Arg Ala Ile Thr Asp Asn 50 55 60

Asp Met Gln Ser Ile Leu Asp Leu His Asn Lys Leu Arg Ser Gln 65 70 75

Val Tyr Pro Thr Ala Ser Asn Met Glu Tyr Met Thr Trp Asp Val 80 85 90

Glu Leu Glu Arg Ser Ala Glu Ser Trp Ala Glu Ser Cys Leu Trp 95 100 105

Glu His Gly Pro Ala Ser Leu Leu Pro Ser Ile Gly Gln Asn Leu
110 115 120

Gly Ala His Trp Gly Arg Tyr Arg Pro Pro Thr Phe His Val Gln 125 130 135

Ser Trp Tyr Asp Glu Val Lys Asp Phe Ser Tyr Pro Tyr Glu His 140 145 150

Glu Cys Asn Pro Tyr Cys Pro Phe Arg Cys Ser Gly Pro Val Cys 155 160 165

Thr His Tyr Thr Gln Val Val Trp Ala Thr Ser Asn Arg Ile Gly

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Asn	Trp	Trp	Gly	His 215	Ala	Pro	Tyr	Lys	His 220	Gly	Arg	Pro	Cys	Ser 225
Ala	Cys	Pro	Pro	Ser 230	Phe	Gly	Gly	Gly	Cys 235	Arg	Glu	Asn	Leu	Cys 240
Tyr	Lys	Glu	Gly	Ser 245	Asp	Arg	Tyr	Tyr	Pro 250	Pro	Arg	Glu	Glu	Glu 255
Thr	Asn	Glu	Ile	Glu 260	Arg	Gln	Gln	Ser	Gln 265	Val	His	Asp	Thr	His 270
Val	Arg	Thr	Arg	Ser 275	Asp	Asp	Ser	Ser	Arg 280	Asn	Glu	Val	Ile	Ser 285
Ala	Gln	Gln	Met	Ser 290	Gln	Ile	Val	Ser	Cys 295	Glu	Val	Arg	Leu	Arg 300
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Glu	Met	Gln	Ser	Ser 335	Ile	Cys	Arg	Ala	Ala 340	Ile	His	Tyr	Gly	Ile 345
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Lys	His	Tyr	Phe	Ile 365	Lys	Ser	Asn	Arg	Asn 370	Gly	Ile	Gln	Thr	Ile 375
Gly	Lys	Tyr	Gln	Ser 380	Ala	Asn	Ser	Phe	Thr 385	Val	Ser	Lys	Val	Thr 390
Val	Gln	Ala	Val	Thr 395	Cys	Glu	Thr	Thr	Val 400	Glu	Gln	Leu	Cys	Pro 405
Phe	His	Lys	Pro	Ala 410	Ser	His	Cys	Pro	Arg 415	Val	Tyr	Cys	Pro	Arg 420
Asn	Cys	Met	Gln	Ala 425	Asn	Pro	His	Tyr	Ala 430	Arg	Val	Ile	Gly	Thr 435
Arg	Val	Tyr	Ser	Asp 440	Leu	Ser	Ser	Ile	Cys 445	Arg	Ala	Ala	Val	His 450
Ala	Gly	Val	Val	Arg 455	Asn	His	Gly	Gly	Tyr 460	Val	Asp	Val	Met	Pro 465

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<212> PRT

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Arg Val Asp Gly Ser Lys Cys Lys Cys Ser Arg Lys Gly Pro Lys 35 40 45

Ile Arg Tyr Ser Asp Val Lys Lys Leu Glu Met Lys Pro Lys Tyr
50 55 60

Pro His Cys Glu Glu Lys Met Val Ile Ile Thr Thr Lys Ser Val 65 70 75

Ser Arg Tyr Arg Gly Gln Glu His Cys Leu His Pro Lys Leu Gln 80 85 90

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<212> PRT

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Thr Asn Tyr Gly Lys Ile Arg Gly Leu Arg Thr Pro Leu Pro Asn 35 40 45

Glu Ile Leu Gly Pro Val Glu Gln Tyr Leu Gly Val Pro Tyr Ala

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Cys	Pro	Gln	His	Leu 95	Asp	Glu	Arg	Ser	Leu 100	Leu	His	Asp	Met	Leu 105
Pro	Ile	Trp	Phe	Thr 110	Ala	Asn	Leu	Asp	Thr 115	Leu	Met	Thr	Tyr	Val 120
Gln	Asp	Gln	Asn	Glu 125	Asp	Cys	Leu	Tyr	Leu 130	Asn	Ile	Tyr	Val	Pro 135
Thr	Glu	Asp	Gly	Ala 140	Asn	Thr	Lys	Lys	Asn 145	Ala	Asp	Asp	Ile	Thr 150
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Lys	Lys	Pro	Val	Met 170	Val	Tyr	Ile	His	Gly 175	Gly	Ser	Tyr	Met	Glu 180
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Asn	Val	Ile	Val	Ile 200	Thr	Ile	Asn	Tyr	Arg 205	Leu	Gly	Ile	Leu	Gly 210
Phe	Leu	Ser	Thr	Gly 215	Asp	Gln	Ala	Ala	Lys 220	Gly	Asn	Tyr	Gly	Leu 225
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Ser	Ser	Trp	Ala	Val 290	Asn	Tyr	Gln	Pro	Ala 295	Lys	Tyr	Thr	Arg	Ile 300
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Val	Glu	Cys	Leu	Arg 320	Asn	Lys	Asn	Tyr	Lys 325	Glu	Leu	Ile	Gln	Gln 330
Thr	Ile	Thr	Pro	Ala	Thr	Tyr	His	Ile	Ala	Phe	Gly	Pro	Val	Ile

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Glu	Thr	His	Arg	Arg 710	Pro	Ser	Pro	Gln	Arg 715	Asn	Thr	Thr	Asn	Asp 720
Ile	Ala	His	Ile	Gln 725	Asn	Glu	Glu	Ile	Met 730	Ser	Leu	Gln	Met	Lys 735
Gln	Leu	Glu	His	Asp 740	His	Glu	Суз	Glu	Ser 745	Leu	Gln	Ala	His	Asp 750
Thr	Leu	Arg	Leu	Thr 755	Cys	Pro	Pro	Asp	Tyr 760	Thr	Leu	Thr	Leu	Arg 765
Arg	Ser	Pro	Asp	Asp 770	Ile	Pro	Leu	Met	Thr 775	Pro	Asn	Thr	Ile	Thr 780
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- Gln Thr Phe Glu Tyr Leu Lys Arg Glu His Ser Leu Ser Lys Pro
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- Tyr Gln Gly Val Gly Thr Gly Ser Ser Ser Leu Trp Asn Leu Met 65 70 75
- Gly Asn Ala Met Val Met Thr Gln Tyr Ile Arg Leu Thr Pro Asp 80 85 90
- Met Gln Ser Lys Gln Gly Ala Leu Trp Asn Arg Val Pro Cys Phe 95 100 105
- Leu Arg Asp Trp Glu Leu Gln Val His Phe Lys Ile His Gly Gln
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- Gly Lys Lys Asn Leu His Gly Asp Gly Leu Ala Ile Trp Tyr Thr 125 130 135
- Lys Asp Arg Met Gln Pro Gly Pro Val Phe Gly Asn Met Asp Lys 140 145 150
- Phe Val Gly Leu Gly Val Phe Val Asp Thr Tyr Pro Asn Glu Glu 155 160 165
- Lys Gln Gln Glu Arg Val Phe Pro Tyr Ile Ser Ala Met Val Asn 170 175 180
- Asn Gly Ser Leu Ser Tyr Asp His Glu Arg Asp Gly Arg Pro Thr 185 190 195
- Glu Leu Gly Gly Cys Thr Ala Ile Val Arg Asn Leu His Tyr Asp 200 205 210
- Thr Phe Leu Val Ile Arg Tyr Val Lys Arg His Leu Thr Ile Met 215 220 225
- Met Asp Ile Asp Gly Lys His Glu Trp Arg Asp Cys Ile Glu Val 230 235 240
- Pro Gly Val Arg Leu Pro Arg Gly Tyr Tyr Phe Gly Thr Ser Ser 245 250 255

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 Glu Met Thr Ala Pro Leu Pro Pro Leu Ser Gly Leu Ala Leu Phe
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Arg Ile Met Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro 50 55 60

Val Tyr Glu Ala Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu 65 70 75

Arg Ser Met Glu Gly His Ala Pro His His Phe Lys Leu Val Ser 80 85 90

Val His Val Phe Ile Arg His Gly Asp Arg Tyr Pro Leu Tyr Val 95 100 105

Ile Pro Lys Thr Lys Arg Pro Glu Ile Asp Cys Thr Leu Val Ala 110 115 120

Asn Arg Lys Pro Tyr His Pro Lys Leu Glu Ala Phe Ile Ser His 125 130 135

Met Ser Lys Gly Ser Gly Ala Ser Phe Glu Ser Pro Leu Asn Ser 140 145 150

Leu Pro Leu Tyr Pro Asn His Pro Leu Cys Glu Met Gly Glu Leu 155 160 165

Thr Gln Thr Gly Val Val Gln His Leu Gln Asn Gly Gln Leu Leu 170 175 180

Arg Asp Ile Tyr Leu Lys Lys His Lys Leu Leu Pro Asn Asp Trp
185 190 195

Ser Ala Asp Gln Leu Tyr Leu Glu Thr Thr Gly Lys Ser Arg Thr 200 205 210

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Cys	Ser	Gly	Ser	Cys 245	Tyr	Cys	Pro	Val	Arg 250	Asn	Gln	Tyr	Leu	Glu 255
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Gln	Asp	His	His	Lys 440	Arg	Ser	Pro	Lys	Pro 445	Met	Cys	Pro	Leu	Glu 450
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Glu	Arg	Gly	Val	Arg 65	Ile	Ile	Pro	Arg	Gly 70	Arg	Thr	Gln	Leu	Phe 75
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Pro	Leu	Ser	Ser	Asn 545	Val	Ser	Leu	Ser	Leu 550	Phe	Val	Leu	Asp	Gln 555
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Gly Ser Let	ı Glu Ser 680		Ala i	Asn	Ser	Glu 685	Thr	Ser	Asp	Leu	Thr 690
Leu Tyr Le	val Val 695		Val 1	Ala	Ala	Val 700	Ser	Cys	Val	Phe	Leu 705
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Ser His Le	ı Ile Phe 770		Gln :	Pro	Asn	Tyr 775	Ala	Asp	Met	Leu	Val 780
Ser Gln Gl	ı Ser Phe 785		Lys :	Ser	Glu	Pro 790	Leu	Leu	Leu	Ser	Gly 795
Asp Ser Va	Phe Ser 800		Asp	Ser	His	Gly 805	Leu	Ile	Glu	Val	Ser 810
Leu Tyr Gl	n Ile Phe 815		Leu :	Phe	Phe	Phe 820	Asn	Cys	Ser	Val	Ser 825
Gln Ala Gl	y Val Gln 830		Tyr :	Asp	His	Ser 835	Ser	Leu	Arg	Pro	Gln 840
Thr Pro Arc	g Leu Lys 845		Leu :	Ser	His	Leu 850	Cys	Leu	Arg	Cys	Asn 855
Arg Asp Ty	Arg Cys		Pro :	Pro	Thr	Val 865	Cys	Leu	Ser	Ile	Tyr 870
Leu Ser Ile	e Tyr Leu	Ser :	Ile '	Tyr	Leu	Ser	Ile	Tyr	Leu	Leu	Leu

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Asp Lys Val Leu Gly Gly His Glu Cys Gln Pro His Ser Gln Pro \$35\$ 40 45

Trp Gln Ala Ala Leu Phe Gln Gly Gln Gln Leu Leu Cys Gly Gly 50 55 60

Val Leu Val Gly Gly Asn Trp Val Leu Thr Ala Ala His Cys Lys 65 70 75

Lys Pro Lys Tyr Thr Val Arg Leu Gly Asp His Ser Leu Gln Asn 80 85 90

Lys Asp Gly Pro Glu Gln Glu Ile Pro Val Val Gln Ser Ile Pro 95 100 105

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 Lys Cys Thr Val Ser Gly Trp Gly Thr Val Thr Ser Pro Arg Glu
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 Asn Phe Pro Asp Thr Leu Asn Cys Ala Glu Val Lys Ile Phe Pro
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 Gln Lys Lys Cys Glu Asp Ala Tyr Pro Gly Gln Ile Thr Asp Gly
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 Asp Ser Gly Gly Pro Leu Val Cys Asp Gly Ala Leu Gln Gly Ile
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Val	Asp	Pro	Ala	Thr 125	Phe	His	Gly	Leu	Gly 130	Arg	Leu	His	Thr	Leu 135
His	Leu	Asp	Arg	Cys 140	Gly	Leu	Gln	Glu	Leu 145	Gly	Pro	Gly	Leu	Phe 150
Arg	Gly	Leu	Ala	Ala 155	Leu	Gln	Tyr	Leu	Tyr 160	Leu	Gln	Asp	Asn	Ala 165
Leu	Gln	Ala	Leu	Pro 170	Asp	Asp	Thr	Phe	Arg 175	Asp	Leu	Gly	Asn	Leu 180
Thr	His	Leu	Phe	Leu 185	His	Gly	Asn	Arg	Ile 190	Ser	Ser	Val	Pro	Glu 195
Arg	Ala	Phe	Arg	Gly 200	Leu	His	Ser	Leu	Asp 205	Arg	Leu	Leu	Leu	His 210
Gln	Asn	Arg	Val	Ala 215	His	Val	His	Pro	His 220	Ala	Phe	Arg	Asp	Leu 225
Gly	Arg	Leu	Met	Thr 230	Leu	Tyr	Leu	Phe	Ala 235	Asn	Asn	Leu	Ser	Ala 240
Leu	Pro	Thr	Glu	Ala 245	Leu	Ala	Pro	Leu	Arg 250	Ala	Leu	Gln	Tyr	Leu 255
Arg	Leu	Asn	Asp	Asn 260	Pro	Trp	Val	Cys	Asp 265	Cys	Arg	Ala	Arg	Pro 270
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Pro	Cys	Ser	Leu	Pro 290	Gln	Arg	Leu	Ala	Gly 295	Arg	Asp	Leu	Lys	Arg 300
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Pro	Arg	His	Ile	Asn 380	Asp	Ser	Pro	Phe	Gly 385	Thr	Leu	Pro	Gly	Ser 390
Ala	Glu	Pro	Pro	Leu 395	Thr	Ala	Val	Arg	Pro 400	Glu	Gly	Ser	Glu	Pro 405
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Ser	Gly	Gly	Gly	Gly 440	Thr	Gly	Asp	Ser	Glu 445	Gly	Ser	Gly	Ala	Leu 450
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Val Thr Asn Leu Ala Lys Asp Leu Gly Leu Glu Gln Arg Glu Phe 50 55 60

Ser Arg Arg Gly Val Arg Val Val Ser Arg Gly Asn Lys Leu His
65 70 75

Leu Gln Leu Asn Gln Glu Thr Ala Asp Leu Leu Leu Asn Glu Lys 80 85 90

Leu Asp Arg Glu Asp Leu Cys Gly His Thr Glu Pro Cys Val Leu 95 100 105

Arg Phe Gln Val Leu Leu Glu Ser Pro Phe Glu Phe Phe Gln Ala 110 115 120

Glu Leu Gln Val Ile Asp Ile Asn Asp His Ser Pro Val Phe Leu 125 130 135

Asp Lys Gln Met Leu Val Lys Val Ser Glu Ser Ser Pro Pro Gly 140 145 150

Thr Thr Phe Pro Leu Lys Asn Ala Glu Asp Leu Asp Val Gly Gln
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Val Leu Thr Arg Lys Arg Ser Asp Gly Arg Lys Tyr Pro Glu Leu 185 190 195

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Pro	Phe	Leu	Leu	Lys 395	Ser	Ala	Glu	Asn	Phe 400	Tyr	Thr	Leu	Leu	Thr 405
Glu	Arg	Pro	Leu	Asp 410	Arg	Glu	Ser	Arg	Ala 415	Glu	Tyr	Asn	Ile	Thr 420
Ile	Thr	Val	Thr	Asp 425	Leu	Gly	Thr	Pro	Met 430	Leu	Ile	Thr	Gln	Leu 435
Asn	Met	Thr	Val	Leu 440	Ile	Ala	Asp	Val	Asn 445	Asp	Asn	Ala	Pro	Ala 450
Phe	Thr	Gln	Thr	Ser 455	Tyr	Thr	Leu	Phe	Val 460	Arg	Glu	Asn	Asn	Ser 465
Pro	Ala	Leu	His	Ile 470	Arg	Ser	Val	Ser	Ala 475	Thr	Asp	Arg	Asp	Ser 480
Gly	Thr	Asn	Ala	Gln 485	Val	Thr	Tyr	Ser	Leu 490	Leu	Pro	Pro	Gln	Asp 495
Pro	His	Leu	Pro	Leu 500	Thr	Ser	Leu	Val	Ser 505	Ile	Asn	Ala	Asp	Asn 510
Gly	His	Leu	Phe	Ala 515	Leu	Arg	Ser	Leu	Asp 520	Tyr	Glu	Ala	Leu	Gln 525

Gly Phe Gln Phe Arg Val Gly Ala Ser Asp His Gly Ser Pro Ala Leu Ser Ser Glu Ala Leu Val Arg Val Val Leu Asp Ala Asn Asp Asn Ser Pro Phe Val Leu Tyr Pro Leu Gln Asn Gly Ser Ala 560 Pro Cys Thr Glu Leu Val Pro Arg Ala Ala Glu Pro Gly Tyr Leu Val Thr Lys Val Val Ala Val Asp Gly Asp Ser Gly Gln Asn Ala Trp Leu Ser Tyr Gln Leu Leu Lys Ala Thr Glu Leu Gly Leu Phe 605 Gly Val Trp Ala His Asn Gly Glu Val Arg Thr Ala Arg Leu Leu Ser Glu Arg Asp Ala Ala Lys His Arg Leu Val Val Leu Val Lys Asp Asn Gly Glu Pro Pro Arg Ser Ala Thr Ala Thr Leu His Val 650 655 Leu Leu Val Asp Gly Phe Ser Gln Pro Tyr Leu Pro Leu Pro Glu Ala Ala Pro Thr Gln Ala Gln Ala Asp Leu Leu Thr Val Tyr Leu 680 Val Val Ala Leu Ala Ser Val Ser Ser Leu Phe Leu Phe Ser Val 695 Leu Leu Phe Val Ala Val Arg Leu Cys Arg Arg Ser Arg Ala Ala 710 Ser Val Gly Arg Cys Leu Val Pro Glu Gly Pro Leu Pro Gly His Leu Val Asp Met Ser Gly Thr Arg Thr Leu Ser Gln Ser Tyr Gln Tyr Glu Val Cys Leu Ala Gly Gly Ser Gly Thr Asn Glu Phe Lys 755 765 Phe Leu Lys Pro Ile Ile Pro Asn Phe Pro Pro Gln Cys Pro Gly 775 Lys Glu Ile Gln Gly Asn Ser Thr Phe Pro Asn Asn Phe Gly Phe 790 795 Asn Ile Gln

Wall TIE GIL

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<211> 1379
<212> DNA
<213> Homo sapiens
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 cggtcgacga ccgccccgcg tcatgcggct cctcggctgg tggcaagtat 150
 tgctgtgggt gctgggactt cccgtccgcg gcgtggaggt tgcagaggaa 200
 agtggtcgct tatggtcaga ggagcagcct gctcaccctc tccaggtggg 250
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 caaggtgcaa cgtccgagag agccttttct ctctggatgg cgctggagca 500
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<211> 360

<212> PRT

<213> Homo sapiens

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Leu Gly Trp Trp Gln Val Leu Leu Trp Val Leu Gly Leu Pro Val 20 25 30

Arg Gly Val Glu Val Ala Glu Glu Ser Gly Arg Leu Trp Ser Glu
35 40 45

Glu Gln Pro Ala His Pro Leu Gln Val Gly Ala Val Tyr Leu Gly
50 55 60

Glu Glu Glu Leu Leu His Asp Pro Met Gly Gln Asp Arg Ala Ala 65 70 75

Glu Glu Ala Asn Ala Val Leu Gly Leu Asp Thr Gln Gly Asp His

				80					85					90
Met	Val	Met	Leu	Ser 95	Val	Ile	Pro	Gly	Glu 100	Ala	Glu	Asp	Lys	Val 105
Ser	Ser	Glu	Pro	Ser 110	Gly	Val	Thr	Суѕ	Gly 115	Ala	Gly	Gly	Ala	Glu 120
Asp	Ser	Arg	Cys	Asn 125	Val	Arg	Glu	Ser	Leu 130	Phe	Ser	Leu	Asp	Gly 135
Ala	Gly	Ala	His	Phe 140	Pro	Asp	Arg	Glu	Glu 145	Glu	Tyr	Tyr	Thr	Glu 150
Pro	Glu	Val	Ala	Glu 155	Ser	Asp	Ala	Ala	Pro 160	Thr	Glu	Asp	Ser	Asn 165
Asn	Thr	Glu	Ser	Leu 170	Lys	Ser	Pro	Lys	Val 175	Asn	Cys	Glu	Glu	Arg 180
Asn	Ile	Thr	Gly	Leu 185	Glu	Asn	Phe	Thr	Leu 190	Lys	Ile	Leu	Asn	Met 195
Ser	Gln	Asp	Leu	Met 200	Asp	Phe	Leu	Asn	Pro 205	Asn	Gly	Ser	Asp	Cys 210
Thr	Leu	Val	Leu	Phe 215	Tyr	Thr	Pro	Trp	Cys 220	Arg	Phe	Ser	Ala	Ser 225
Leu	Ala	Pro	His	Phe 230	Asn	Ser	Leu	Pro	Arg 235	Ala	Phe	Pro	Ala	Leu 240
His	Phe	Leu	Ala	Leu 245	Asp	Ala	Ser	Gln	His 250	Ser	Ser	Leu	Ser	Thr 255
Arg	Phe	Gly	Thr	Val 260	Ala	Val	Pro	Asn	Ile 265	Leu	Leu	Phe	Gln	Gly 270
Ala	Lys	Pro	Met	Ala 275	Arg	Phe	Asn	His	Thr 280	Asp	Arg	Thr	Leu	Glu 285
Thr	Leu	Lys	Ile	Phe 290	Ile	Phe	Asn	Gln	Thr 295	Gly	Ile	Glu	Ala	Lys 300
Lys	Asn	Val	Val	Val 305	Thr	Gln	Ala	Asp	Gln 310	Ile	Gly	Pro	Leu	Pro 315
Ser	Thr	Leu	Ile	Lys 320	Ser	Val	Asp	Trp	Leu 325	Leu	Val	Phe	Ser	Leu 330
Phe	Phe	Leu	Ile	Ser 335	Phe	Ile	Met	Tyr	Ala 340	Thr	Ile	Arg	Thr	Glu 345
Ser	Ile	Arg	Trp	Leu 350	Ile	Pro	Gly	Gln	Glu 355	Gln	Glu	His	Val	Glu 360

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<211> 1196
<212> DNA
<213> Homo sapiens
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 ggctcggcgc gcgggctctt cctctttggc cagcccgact tctcctacaa 150
 gcgcagcaat tgcaagccca tcccggtcaa cctgcagctg tgccacggca 200
 tcgaatacca gaacatgcgg ctgcccaacc tgctgggcca cgagaccatg 250
 aaggaggtgc tggagcaggc cggcgcttgg atcccgctgg tcatgaagca 300
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 tececetege tageagegae caceteetge cagecacega ggaageteea 550
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<211> 295

<212> PRT

<213> Homo sapiens

<400> 415

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His Cys Cys Leu Gly Ser Ala Arg Gly Leu Phe Leu Phe Gly Gln $20 \\ 25 \\ 30$

Pro Asp Phe Ser Tyr Lys Arg Ser Asn Cys Lys Pro Ile Pro Val 35 40 45

Asn Leu Gln Leu Cys His Gly Ile Glu Tyr Gln Asn Met Arg Leu 50 55 60

Pro Asn Leu Leu Gly His Glu Thr Met Lys Glu Val Leu Glu Gln $\,$ $\,$ $\,$ 70 $\,$ $\,$ 75

Ala Gly Ala Trp Ile Pro Leu Val Met Lys Gln Cys His Pro Asp 80 85 90

Thr Lys Lys Phe Leu Cys Ser Leu Phe Ala Pro Val Cys Leu Asp 95 100 105

Asp Leu Asp Glu Thr Ile Gln Pro Cys His Ser Leu Cys Val Gln
110 115 120

Val Lys Asp Arg Cys Ala Pro Val Met Ser Ala Phe Gly Phe Pro 125 130 135

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Trp Pro Asp Met Leu Glu Cys Asp Arg Phe Pro Gln Asp Asn Asp
                 140
Leu Cys Ile Pro Leu Ala Ser Ser Asp His Leu Leu Pro Ala Thr
                 155
Glu Glu Ala Pro Lys Val Cys Glu Ala Cys Lys Asn Lys Asn Asp
                 170
Asp Asp Asn Asp Ile Met Glu Thr Leu Cys Lys Asn Asp Phe Ala
                 185
Leu Lys Ile Lys Val Lys Glu Ile Thr Tyr Ile Asn Arg Asp Thr
                 200
Lys Ile Ile Leu Glu Thr Lys Ser Lys Thr Ile Tyr Lys Leu Asn
                 215
Gly Val Ser Glu Arg Asp Leu Lys Lys Ser Val Leu Trp Leu Lys
Asp Ser Leu Gln Cys Thr Cys Glu Glu Met Asn Asp Ile Asn Ala
Pro Tyr Leu Val Met Gly Gln Lys Gln Gly Glu Leu Val Ile
Thr Ser Val Lys Arg Trp Gln Lys Gly Gln Arg Glu Phe Lys Arg
Ile Ser Arg Ser Ile Arg Lys Leu Gln Cys
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<211> 25
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<223> Synthetic oligonucleotide probe
<400> 417
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<210> 418
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 cgctgggtgt tcctgctcgc gatcagcctg ctcaactgct ccaacgccac 150
 getgtggete agetttgeae etgtggetga egteattget gaggaettgg 200
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 ccgtgcggcg accatcctgg gtgcgtggct gaactttgcc gggagtgtgc 350
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 ccctttqccc tqqtqtccca qctqcaqqqa cagacccttq ccctggctgc 1050
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<211> 560

<212> PRT

<213> Homo sapiens

<400> 420

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Ala Leu Cys Ala Gln Arg Gly His Arg Thr Tyr Ala Arg Arg Trp 20 25 30

Val Phe Leu Leu Ala Ile Ser Leu Leu Asn Cys Ser Asn Ala Thr 35 40 45

Leu Trp Leu Ser Phe Ala Pro Val Ala Asp Val Ile Ala Glu Asp 50 55 60

Leu Val Leu Ser Met Glu Gln Ile Asn Trp Leu Ser Leu Val Tyr
65 70 75

Leu Val Val Ser Thr Pro Phe Gly Val Ala Ala Ile Trp Ile Leu 80 85 90

Asp Ser Val Gly Leu Arg Ala Ala Thr Ile Leu Gly Ala Trp Leu 95 100 105

Asn Phe Ala Gly Ser Val Leu Arg Met Val Pro Cys Met Val Val

				110					115					120
Gly	Thr	Gln	Asn	Pro 125	Phe	Ala	Phe	Leu	Met 130	Gly	Gly	Gln	Ser	Leu 135
Cys	Ala	Leu	Ala	Gln 140	Ser	Leu	Val	Ile	Phe 145	Ser	Pro	Ala	Lys	Leu 150
Ala	Ala	Leu	Trp	Phe 155	Pro	Glu	His	Gln	Arg 160	Ala	Thr	Ala	Asn	Met 165
Leu	Ala	Thr	Met	Ser 170	Asn	Pro	Leu	Gly	Val 175	Leu	Val	Ala	Asn	Val 180
Leu	Ser	Pro	Val	Leu 185	Val	Lys	Lys	Gly	Glu 190	Asp	Ile	Pro	Leu	Met 195
Leu	Gly	Val	Tyr	Thr 200	Ile	Pro	Ala	Gly	Val 205	Val	Cys	Leu	Leu	Ser 210
Thr	Ile	Cys	Leu	Trp 215	Glu	Ser	Val	Pro	Pro 220	Thr	Pro	Pro	Ser	Ala 225
Gly	Ala	Ala	Ser	Ser 230	Thr	Ser	Glu	Lys	Phe 235	Leu	Asp	Gly	Leu	Lys 240
Leu	Gln	Leu	Met	Trp 245	Asn	Lys	Ala	Tyr	Val 250	Ile	Leu	Ala	Val	Cys 255
Leu	Gly	Gly	Met	Ile 260	Gly	Ile	Ser	Ala	Ser 265	Phe	Ser	Ala	Leu	Leu 270
Glu	Gln	Ile	Leu	Cys 275	Ala	Ser	Gly	His	Ser 280	Ser	Gly	Phe	Ser	Gly 285
Leu	Cys	Gly	Ala	Leu 290	Phe	Ile	Thr	Phe	Gly 295	Ile	Leu	Gly	Ala	Leu 300
Ala	Leu	Gly	Pro	Tyr 305	Val	Asp	Arg	Thr	Lys 310	His	Phe	Thr	Glu	Ala 315
Thr	Lys	Ile	Gly	Leu 320	Cys	Leu	Phe	Ser	Leu 325	Ala	Cys	Val	Pro	Phe 330
Ala	Leu	Val	Ser	Gln 335	Leu	Gln	Gly	Gln	Thr 340	Leu	Ala	Leu	Ala	Ala 345
Thr	Cys	Ser	Leu	Leu 350	Gly	Leu	Phe	Gly	Phe 355	Ser	Val	Gly	Pro	Val 360
Ala	Met	Glu	Leu	Ala 365	Val	Glu	Cys	Ser	Phe 370	Pro	Val	Gly	Glu	Gly 375
Ala	Ala	Thr	Gly	Met 380	Ile	Phe	Val	Leu	Gly 385	Gln	Ala	Glu	Gly	Ile 390
Leu	Ile	Met	Leu	Ala 395	Met	Thr	Ala	Leu	Thr 400	Val	Arg	Arg	Ser	Glu 405

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 Thr Val Ser Leu Leu Met Ala Gly Leu Cys Thr Phe Phe Ser
 Cys Ile Leu Ala Val Phe Phe His Thr Pro Tyr Arg Arg Leu Gln
                                     445
 Ala Glu Ser Gly Glu Pro Pro Ser Thr Arg Asn Ala Val Gly Gly
                 455
 Ala Asp Ser Gly Pro Gly Val Asp Arg Gly Gly Ala Gly Arg Ala
                 470
 Gly Val Leu Gly Pro Ser Thr Ala Thr Pro Glu Cys Thr Ala Arg
                 485
 Gly Ala Ser Leu Glu Asp Pro Arg Gly Pro Gly Ser Pro His Pro
 Ala Cys His Arg Ala Thr Pro Arg Ala Gln Gly Pro Ala Ala Thr
 Asp Ala Pro Ser Arg Pro Gly Arg Leu Ala Gly Arg Val Gln Ala
 Ser Arg Phe Ile Asp Pro Ala Gly Ser His Ser Ser Phe Ser Ser
 Pro Trp Val Ile Thr
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<210> 422
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<223> Synthetic oligonucleotide probe
<400> 422
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<213> Homo sapiens

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Ile Gly Lys Leu Ser Gln Glu Leu Gly Arg Glu Glu Arg Arg Arg 50 55 60

Gln Ala Gly Ala Ala Phe Gln Val Leu Gln Leu Pro Gln Ala Leu 65 70 75

Pro Ile Gln Val Asp Ser Glu Glu Gly Leu Leu Ser Thr Gly Arg 80 85 90

Arg Leu Asp Arg Glu Gln Leu Cys Arg Gln Trp Asp Pro Cys Leu
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Val Ser Phe Asp Val Leu Ala Thr Gly Asp Leu Ala Leu Ile His
110 115 120

Val Glu Ile Gln Val Leu Asp Ile Asn Asp His Gln Pro Arg Phe 125 130 135

Pro Lys Gly Glu Glu Leu Glu Ile Ser Glu Ser Ala Ser Leu
140 145 150

Arg Thr Arg Ile Pro Leu Asp Arg Ala Leu Asp Pro Asp Thr Gly
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Pro Asn Thr Leu His Thr Tyr Thr Leu Ser Pro Ser Glu His Phe 170 175 180

Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr Lys His Ala Glu 185 190 195

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Glu	Gln	Trp	Pro	Lys 425	Tyr	Thr	Leu	Thr	Leu 430	Leu	Ala	Gln	Asp	Gln 435
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Leu	Asp	Ala	Asn	Asp 560	Asn	Ala	Pro	Glu	Val 565	Val	Gln	Pro	Val	Leu 570
Ser	Asp	Gly	Lys	Ala 575	Ser	Leu	Ser	Val	Leu 580	Val	Asn	Ala	Ser	Thr 585
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Ala	Gly	Thr	Asp	Thr 605	Pro	Pro	Leu	Ala	Thr 610	His	Ser	Ser	Arg	Pro 615
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Ala	Arg	Lys	Pro	Gly 710	Ala	Leu	Ser	Met	Ser 715	Met	Leu	Thr	Val	Ile 720
Cys	Leu	Ala	Val	Leu 725	Leu	Gly	Ile	Phe	Gly 730	Leu	Ile	Leu	Ala	Leu 735
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Pro	Gln	Lys	His	Ile 770	Gln	Lys	Ala	Asp	Ile 775	His	Leu	Val	Pro	Val 780

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Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val 1100 1105 1110

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Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser 1130 1135 1140

Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala 1145 1150 1155

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Lys Asp Tyr Glu Ile Arg Gln Tyr Val Val Gln Val Ile Phe Ser 35 40 45

Val Thr Phe Ala Phe Ser Cys Thr Met Phe Glu Leu Ile Ile Phe 50 55 60

Glu Ile Leu Gly Val Leu Asn Ser Ser Ser Arg Tyr Phe His Trp
65 70 75

Lys Met Asn Leu Cys Val Ile Leu Leu Ile Leu Val Phe Met Val 80 85 90

Pro Phe Tyr Ile Gly Tyr Phe Ile Val Ser Asn Ile Arg Leu Leu 95 100 105

His Lys Gln Arg Leu Leu Phe Ser Cys Leu Leu Trp Leu Thr Phe 110 115 120

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Val	Thr	Asp	Thr	Asp 185	Ile	Leu	Ala	Leu	Glu 190	Arg	Arg	Leu	Leu	Gln 195
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Glu	Leu	Ser	Arg	Gln 260	Leu	Phe	Leu	Glu	Thr 265	Ala	Asp	Leu	Tyr	Ala 270
Thr	Lys	Glu	Arg	Ile 275	Glu	Tyr	Ser	Lys	Thr 280	Phe	Lys	Gly	Lys	Tyr 285
Phe	Asn	Phe	Leu	Gly 290	Tyr	Phe	Phe	Ser	Ile 295	Tyr	Cys	Val	Trp	Lys 300
Ile	Phe	Met	Ala	Thr 305	Ile	Asn	Ile	Val	Phe 310	Asp	Arg	Val	Gly	Lys 315
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Ile	Thr	Leu	Thr	Lys 365	Phe	Phe	Tyr	Ala	Ile 370	Ser	Ser	Ser	Lys	Ser 375
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Phe	Val	Ser	Ser	Val 395	Leu	Leu	Ile	Arg	Met 400	Ser	Met	Pro	Leu	Glu 405
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<211> 1141

<212> PRT

<213> Homo sapiens

<400> 437

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35 40 45

Gly Glu Pro Gly Ser Leu Phe Gly Phe Ser Val Ala Leu His Arg
50 55 60

Gln Leu Gln Pro Arg Pro Gln Ser Trp Leu Leu Val Gly Ala Pro 65 70 75

Gln Ala Leu Ala Leu Pro Gly Gln Gln Ala Asn Arg Thr Gly Gly

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Paris:

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Val	Asp	Ile	Asp	Gln 110	Gly	Ala	Asp	Met	Gln 115	Lys	Glu	Ser	Lys	Glu 120
Asn	Gln	Trp	Leu	Gly 125	Val	Ser	Val	Arg	Ser 130	Gln	Gly	Pro	Gly	Gly 135
Lys	Ile	Val	Thr	Cys 140	Ala	His	Arg	Tyr	Glu 145	Ala	Arg	Gln	Arg	Val 150
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Phe	Cys	Gln	Gln	Gly 200	Thr	Ala	Ala	Ala	Phe 205	Ser	Pro	Asp	Ser	His 210
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Pro	Arg	Leu	Ile	Pro 260	Val	Pro	Ala	Asn	Ser 265	Tyr	Phe	Gly	Phe	Ser 270
Ile	Asp	Ser	Gly	Lys 275	Gly	Leu	Val	Arg	Ala 280	Glu	Glu	Leu	Ser	Phe 285
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Val	Ala	Leu	Asp	Tyr 530	Val	Leu	Asp	Ala	Asp 535	Thr	Asp	Arg	Arg	Leu 540
Arg	Gly	Gln	Val	Pro 545	Arg	Val	Thr	Phe	Leu 550	Ser	Arg	Asn	Leu	Glu 555
Glu	Pro	Lys	His	Gln 560	Ala	Ser	Gly	Thr	Val 565	Trp	Leu	Lys	His	Gln 570
His	Asp	Arg	Val	Cys 575	Gly	Asp	Ala	Met	Phe 580	Gln	Leu	Gln	Glu	Asn 585
Val	Lys	Asp	Lys	Leu 590	Arg	Ala	Ile	Val	Val 595	Thr	Leu	Ser	Tyr	Ser 600
Leu	Gln	Thr	Pro	Arg 605	Leu	Arg	Arg	Gln	Ala 610	Pro	Gly	Gln	Gly	Leu 615
Pro	Pro	Val	Ala	Pro 620	Ile	Leu	Asn	Ala	His 625	Gln	Pro	Ser	Thr	Gln 630
Arg	Ala	Glu	Ile	His 635	Phe	Leu	Lys	Gln	Gly 640	Cys	Gly	Glu	Asp	Lys 645
Ile	Cys	Gln	Ser	Asn 650	Leu	Gln	Leu	Val	His 655	Ala	Arg	Phe	Cys	Thr 660
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Leu	Ser	Ile	Ala	Gly 815	Met	Ala	Ile	Pro	Gln 820	Gln	Leu	Phe	Phe	Ser 825
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Gly	Ser	Lys	Val	Lys 845	Tyr	Glu	Val	Thr	Val 850	Ser	Asn	Gln	Gly	Gln 855
Ser	Leu	Arg	Thr	Leu 860	Gly	Ser	Ala	Phe	Leu 865	Asn	Ile	Met	Trp	Pro 870
His	Glu	Ile	Ala	Asn 875	Gly	Lys	Trp	Leu	Leu 880	Tyr	Pro	Met	Gln	Val 885
Glu	Leu	Glu	Gly	Gly 890	Gln	Gly	Pro	Gly	Gln 895	Lys	Gly	Leu	Cys	Ser 900
Pro	Arg	Pro	Asn	Ile 905	Leu	His	Leu	Asp	Val 910	Asp	Ser	Arg	Asp	Arg 915
Arg	Arg	Arg	Glu	Leu 920	Glu	Pro	Pro	Glu	Gln 925	Gln	Glu	Pro	Gly	Glu 930
Arg	Gln	Glu	Pro	Ser 935	Met	Ser	Trp	Trp	Pro 940	Val	Ser	Ser	Ala	Glu 945
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<223> Synthetic oligonucleotide probe

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 Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val
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 Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu
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 Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Trp Lys
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                                     1060
 Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro
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                                     1075
 Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe
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                                     1090
 Lys Glu Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser
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                                     1105
 Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp
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                                     1120
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<211> 436

<212> PRT

<213> Homo sapiens

<400> 442

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Gly Arg Ser Asp Gly Gly Asn Phe Leu Asp Asp Lys Gln Trp Leu 35 40 45

Thr Thr Ile Ser Gln Tyr Asp Lys Glu Val Gly Gln Trp Asn Lys

				50					55					60
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Leu	Lys	Met	Lys	Cys 95	Ser	Arg	His	Lys	Val 100	Суз	Ile	Ala	Gln	Asp 105
Ser	Gln	Thr	Ala	Val 110	Cys	Ile	Ser	His	Arg 115	Arg	Leu	Thr	His	Arg 120
Met	Lys	Glu	Ala	Gly 125	Val	Asp	His	Arg	Gln 130	Trp	Arg	Gly	Pro	Ile 135
Leu	Ser	Thr	Cys	Lys 140	Gln	Суѕ	Pro	Val	Val 145	Tyr	Pro	Ser	Pro	Val 150
Суѕ	Gly	Ser	Asp	Gly 155	His	Thr	Tyr	Ser	Phe 160	Gln	Cys	Lys	Leu	Glu 165
Tyr	Gln	Ala	Cys	Val 170	Leu	Gly	Lys	Gln	Ile 175	Ser	Val	Lys	Суз	Glu 180
Gly	His	Cys	Pro	Cys 185	Pro	Ser	Asp	Lys	Pro 190	Thr	Ser	Thr	Ser	Arg 195
Asn	Val	Lys	Arg	Ala 200	Суз	Ser	Asp	Leu	Glu 205	Phe	Arg	Glu	Val	Ala 210
Asn	Arg	Leu	Arg	Asp 215	Trp	Phe	Lys	Ala	Leu 220	His	Glu	Ser	Gly	Ser 225
Gln	Asn	Lys	Lys	Thr 230	Lys	Thr	Leu	Leu	Arg 235	Pro	Glu	Arg	Ser	Arg 240
Phe	Asp	Thr	Ser	Ile 245	Leu	Pro	Ile	Cys	Lys 250	Asp	Ser	Leu	Gly	Trp 255
Met	Phe	Asn	Arg	Leu 260	Asp	Thr	Asn	Tyr	Asp 265	Leu	Leu	Leu	Asp	Gln 270
Ser	Glu	Leu	Arg	Ser 275	Ile	Tyr	Leu	Asp	Lys 280	Asn	Glu	Gln	Cys	Thr 285
Lys	Ala	Phe	Phe	Asn 290	Ser	Cys	Asp	Thr	Tyr 295	Lys	Asp	Ser	Leu	Ile 300
Ser	Asn	Asn	Glu	Trp 305	Cys	Tyr	Cys	Phe	Gln 310	Arg	Gln	Gln	Asp	Pro 315
Pro	Cys	Gln	Thr	Glu 320	Leu	Ser	Asn	Ile	Gln 325	Lys	Arg	Gln	Gly	Val 330
Lys	Lys	Leu	Leu	Gly 335	Gln	Tyr	Ile	Pro	Leu 340	Cys	Asp	Glu	Asp	Gly 345

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 Gly Val Ala Asp Cys Ala Ile Asp Phe Glu Ile Ser Gly Asp Phe
                 380
                                     385
Ala Ser Gly Asp Phe His Glu Trp Thr Asp Asp Glu Asp Asp Glu
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<213> Homo sapiens
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<211> 229

<212> PRT

<213> Homo sapiens

<400> 447

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Glu Cys Phe Tyr Gln Pro Met Pro Leu Lys Ala Ser Leu Glu Ile 50 55 60

Glu Tyr Gln Val Leu Asp Gly Ala Gly Leu Asp Ile Asp Phe His
65 70 75

Leu Ala Ser Pro Glu Gly Lys Thr Leu Val Phe Glu Gln Arg Lys
80 85 90

Ser Asp Gly Val His Thr Val Glu Thr Glu Val Gly Asp Tyr Met 95 100 105

Phe Cys Phe Asp Asn Thr Phe Ser Thr Ile Ser Glu Lys Val Ile

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Gln Glu Asp Trp	Lys Lys Tyr 140	Ile Thr	Gly Thr 145	Asp Ile	Leu	Asp 150						
Met Lys Leu Glu	Asp Ile Leu 155	Glu Ser	Ile Asn 160	Ser Ile	Lys	Ser 165						
Arg Leu Ser Lys	Ser Gly His 170	Ile Gln	Ile Leu 175	Leu Arg	Ala	Phe 180						
Glu Ala Arg Asp A	Arg Asn Ile 185	Gln Glu	Ser Asn 190	Phe Asp	Arg	Val 195						
Asn Phe Trp Ser I	Met Val Asn 200	Leu Val	Val Met 205	Val Val	Val	Ser 210						
Ala Ile Gln Val	Tyr Met Leu 215	Lys Ser	Leu Phe 220	Glu Asp	Lys	Arg 225						
Lys Ser Arg Thr												
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Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys
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Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser

50 55 60

Trp Met Asp Ala Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys 65 70 75

Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser 80 85 90

Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly
95 100 105

Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp
110 115 120

Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys 125 130 135

Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser 140 145 150

Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala 155 160 165

Lys Leu Pro Tyr Val Cys Lys Phe Lys Asp 170 175

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<211> 550

<212> DNA

<213> Homo sapiens

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<211> 125

<212> PRT

<213> Homo sapiens

115

120

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<210> 455 <211> 1518 <212> DNA

<213> Homo sapiens

<400> 455

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<211> 266

<212> PRT

<213> Homo sapiens

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Ala Thr Leu Asn Ser Val Leu Asn Ser Asn Ala Ile Lys Asn Leu 35 40 45

Pro Pro Pro Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val
50 55 60

Ser Ala Ala Pro Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln 657075

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 Cys Gly Thr Asp Glu Tyr Cys Ala Ser Pro Thr Arg Gly Gly Asp
 Ala Gly Val Gln Ile Cys Leu Ala Cys Arg Lys Arg Lys Arg
 Cys Met Arg His Ala Met Cys Cys Pro Gly Asn Tyr Cys Lys Asn
 Gly Ile Cys Val Ser Ser Asp Gln Asn His Phe Arg Gly Glu Ile
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                                     145
 Glu Glu Thr Ile Thr Glu Ser Phe Gly Asn Asp His Ser Thr Leu
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                                     160
                                                          165
 Asp Gly Tyr Ser Arg Arg Thr Thr Leu Ser Ser Lys Met Tyr His
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 Thr Lys Gly Gln Glu Gly Ser Val Cys Leu Arg Ser Ser Asp Cys
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 Ala Ser Gly Leu Cys Cys Ala Arg His Phe Trp Ser Lys Ile Cys
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 Lys Pro Val Leu Lys Glu Gly Gln Val Cys Thr Lys His Arg Arg
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 Lys Gly Ser His Gly Leu Glu Ile Phe Gln Arg Cys Tyr Cys Gly
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 Glu Gly Leu Ser Cys Arg Ile Gln Lys Asp His His Gln Ala Ser
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<211> 4040

<212> DNA

<213> Homo sapiens

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<211> 747

<212> PRT

<213> Homo sapiens

<400> 459

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Arg Ile Ile Leu Cys Phe Leu Ile Val Tyr Met Ala Ile Leu Val 20 25 30

Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr 35 40 45

Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu
50 55 60

Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly
65 70 75

Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu 80 85 90

Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu 95 100 105

Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr 110 115 120

Asp Phe Gly Ile Tyr Asp Asp Pro Glu Ile Ile Thr Leu Glu 125 130 135

Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe 140 145 150

Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala 155 160 165

Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg 170 175 180

Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met 185 190 195

Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly

				200					205					210
Met	Ala	Pro	Val	Lys 215	Tyr	His	Gly	Asp	Arg 220	Ser	Lys	Glu	Ser	Leu 225
Val	Ser	Phe	Ala	Met 230	Gln	His	Val	Arg	Ser 235	Thr	Val	Thr	Glu	Leu 240
Trp	Thr	Gly	Asn	Phe 245	Val	Asn	Ser	Ile	Gln 250	Thr	Ala	Phe	Ala	Ala 255
Gly	Ile	Gly	Trp	Leu 260	Ile	Thr	Phe	Суз	Ser 265	Lys	Gly	Gly	Asp	Cys 270
Leu	Thr	Ser	Gln	Thr 275	Arg	Leu	Arg	Leu	Ser 280	Gly	Met	Leu	Phe	Leu 285
Asn	Ser	Leu	Asp	Ala 290	Lys	Glu	Ile	Tyr	Leu 295	Glu	Val	Ile	His	Asn 300
Leu	Pro	Asp	Phe	Glu 305	Leu	Leu	Ser	Ala	Asn 310	Thr	Leu	Glu	Asp	Arg 315
Leu	Ala	His	His	Arg 320	Trp	Leu	Leu	Phe	Phe 325	His	Phe	Gly	Lys	Asn 330
Glu	Asn	Ser	Asn	Asp 335	Pro	Glu	Leu	Lys	Lys 340	Leu	Lys	Thr	Leu	Leu 345
Lys	Asn	Asp	His	Ile 350	Gln	Val	Gly	Arg	Phe 355	Asp	Cys	Ser	Ser	Ala 360
Pro	Asp	Ile	Cys	Ser 365	Asn	Leu	Tyr	Val	Phe 370	Gln	Pro	Ser	Leu	Ala 375
Val	Phe	Lys	Gly	Gln 380	Gly	Thr	Lys	Glu	Tyr 385	Glu	Ile	His	His	Gly 390
Lys	Lys	Ile	Leu	Tyr 395	Asp	Ile	Leu	Ala	Phe 400	Ala	Lys	Glu	Ser	Val 405
Asn	Ser	His	Val	Thr 410	Thr	Leu	Gly	Pro	Gln 415	Asn	Phe	Pro	Ala	Asn 420
Asp	Lys	Glu	Pro	Trp 425	Leu	Val	Asp	Phe	Phe 430	Ala	Pro	Trp	Cys	Pro 435
Pro	Cys	Arg	Ala	Leu 440	Leu	Pro	Glu	Leu	Arg 445	Arg	Ala	Ser	Asn	Leu 450
Leu	Tyr	Gly	Gln	Leu 455	Lys	Phe	Gly	Thr	Leu 460	Asp	Cys	Thr	Val	His 465
Glu	Gly	Leu	Cys	Asn 470	Met	Tyr	Asn	Ile	Gln 475	Ala	Tyr	Pro	Thr	Thr 480
Val	Val	Phe	Asn	Gln 485	Ser	Asn	Ile	His	Glu 490	Tyr	Glu	Gly	His	His 495

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Ser Ala Glu Gln Ile Leu Glu Phe Ile Glu Asp Leu Met Asn Pro
Ser Val Val Ser Leu Thr Pro Thr Thr Phe Asn Glu Leu Val Thr
                515
Gln Arg Lys His Asn Glu Val Trp Met Val Asp Phe Tyr Ser Pro
Trp Cys His Pro Cys Gln Val Leu Met Pro Glu Trp Lys Arg Met
                                                         555
Ala Arg Thr Leu Thr Gly Leu Ile Asn Val Gly Ser Ile Asp Cys
                560
                                                         570
Gln Gln Tyr His Ser Phe Cys Ala Gln Glu Asn Val Gln Arg Tyr
                575
                                                         585
Pro Glu Ile Arg Phe Phe Pro Pro Lys Ser Asn Lys Ala Tyr Gln
                590
Tyr His Ser Tyr Asn Gly Trp Asn Arg Asp Ala Tyr Ser Leu Arg
                605
Ile Trp Gly Leu Gly Phe Leu Pro Gln Val Ser Thr Asp Leu Thr
                620
Pro Gln Thr Phe Ser Glu Lys Val Leu Gln Gly Lys Asn His Trp
                635
Val Ile Asp Phe Tyr Ala Pro Trp Cys Gly Pro Cys Gln Asn Phe
Ala Pro Glu Phe Glu Leu Leu Ala Arg Met Ile Lys Gly Lys Val
                665
Lys Ala Gly Lys Val Asp Cys Gln Ala Tyr Ala Gln Thr Cys Gln
                680
Lys Ala Gly Ile Arg Ala Tyr Pro Thr Val Lys Phe Tyr Phe Tyr
                695
                                                         705
Glu Arg Ala Lys Arg Asn Phe Gln Glu Glu Gln Ile Asn Thr Arg
                710
Asp Ala Lys Ala Ile Ala Ala Leu Ile Ser Glu Lys Leu Glu Thr
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Leu Arg Asn Gln Gly Lys Arg Asn Lys Asp Glu Leu
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<210> 460

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<400> 460
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<210> 461
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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 461
 gatcagccag ccaataccag cagc 24
<210> 462
<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 462
 gtggtgatga tagaatgctt tgccgaatga aaggagtcaa cagctatccc 50
<210> 463
·<211> 1818
<212> DNA
<213> Homo sapiens
<400> 463
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 ggacagagca aagccatgaa catcatccta gaaatccttc tgcttctgat 100
 caccatcatc tactcctact tggagtcgtt ggtgaagttt ttcattcctc 150
 agaggagaaa atctgtggct ggggagattg ttctcattac tgqagctggg 200
 catggaatag gcaggcagac tacttatgaa tttgcaaaac gacagagcat 250
 attggttctg tgggatatta ataagcgcgg tgtggaggaa actgcagctg 300
 agtgccgaaa actaggcgtc actgcgcatg cgtatgtggt agactgcagc 350
 aacagagaag agatctatcg ctctctaaat caggtgaaga aagaagtggg 400
 tgatgtaaca atcgtggtga ataatgctgg gacagtatat ccagccgatc 450
 ttctcagcac caaggatgaa gagattacca agacatttga ggtcaacatc 500
 ctaggacatt tttggatcac aaaagcactt cttccatcga tgatggagag 550
 aaatcatggc cacatcgtca cagtggcttc agtgtgcggc cacgaaggga 600
 ttccttacct catcccatat tgttccagca aatttgccgc tgttggcttt 650
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cacagaggtc tgacatcaga acttcaggcc ttgggaaaaa ctggtatcaa 700

aacctcatgt ctctgcccag tttttgtgaa tactgggttc accaaaaatc 750 caagcacaag attatggcct gtattggaga cagatgaagt cgtaagaagt 800 ctgatagatg gaatacttac caataagaaa atgatttttg ttccatcgta 850 tatcaatatc tttctgagac tacagaagtt tcttcctgaa cgcgcctcag 900 cgattttaaa tcgtatgcag aatattcaat ttgaagcagt ggttggccac 950 aaaatcaaaa tgaaatgaat aaataagctc cagccagaga tgtatgcatg 1000 ataatgatat gaatagtttc gaatcaatgc tgcaaagctt tatttcacat 1050 tttttcagtc ctgataatat taaaaacatt ggtttggcac tagcagcagt 1100 caaacgaaca agattaatta cctgtcttcc tgtttctcaa gaatatttac 1150 gtagtttttc ataggtctgt ttttcctttc atgcctctta aaaacttctg 1200 tgcttacata aacatactta aaaggttttc tttaagatat tttatttttc 1250 catttaaagg tggacaaaag ctacctccct aaaagtaaat acaaagagaa 1300 cttatttaca cagggaaggt ttaagactgt tcaagtagca ttccaatctg 1350 tagccatgcc acagaatatc aacaagaaca cagaatgagt gcacagctaa 1400 gagatcaagt ttcagcaggc agctttatct caacctggac atattttaag 1450 attcagcatt tgaaagattt ccctagcctc ttcctttttc attagcccaa 1500 aacggtgcaa ctctattctg gactttatta cttgattctg tcttctgtat 1550 aactctgaag tccaccaaaa gtggaccctc tatatttcct ccctttttat 1600 agtettataa gatacattat gaaaggtgae egactetatt ttaaatetea 1650 gaattttaag ttctagcccc atgataacct ttttctttgt aatttatgct 1700 ttcatatatc cttqqtccca qaqatqttta qacaatttta qqctcaaaaa 1750 ttaaagctaa cacaggaaaa ggaactgtac tggctattac ataagaaaca 1800 atggacccaa gagaagaa 1818

<210> 464

<211> 300

<212> PRT

<213> Homo sapiens

<400> 464

Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile 1 5 10 15

Tyr Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg
20 25 30

Arg Lys Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly Asp Val Thr Ile Val Val Asn Asn 110 115 120 Ala Gly Thr Val Tyr Pro Ala Asp Leu Leu Ser Thr Lys Asp Glu 130 Glu Ile Thr Lys Thr Phe Glu Val Asn Ile Leu Gly His Phe Trp 140 150 Ile Thr Lys Ala Leu Leu Pro Ser Met Met Glu Arg Asn His Gly 155 His Ile Val Thr Val Ala Ser Val Cys Gly His Glu Gly Ile Pro 170 Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys Thr Gly 200 Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly Phe 215 Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp 230 240 Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys 245 Met Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln 260 Lys Phe Leu Pro Glu Arg Ala Ser Ala Ile Leu Asn Arg Met Gln 280 Asn Ile Gln Phe Glu Ala Val Val Gly His Lys Ile Lys Met Lys 290

<210> 465

<211> 1547

<212> DNA

<213> Homo sapiens

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gcaatctggg cttcttgttc actccactgc ctctatccat tgagtactgt 1500 atcgatattg ttttttaaga ttaatatatt tcaggtattt aatacga 1547

<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

Met Thr Lys Ala Arg Leu Phe Arg Leu Trp Leu Val Leu Gly Ser 1 5 10 15

Val Phe Met Ile Leu Leu Ile Ile Val Tyr Trp Asp Ser Ala Gly
20 25 30

Ala Ala His Phe Tyr Leu His Thr Ser Phe Ser Arg Pro His Thr 35 40 45

Gly Pro Pro Leu Pro Thr Pro Gly Pro Asp Arg Asp Arg Glu Leu
50 55 60

Thr Ala Asp Ser Asp Val Asp Glu Phe Leu Asp Lys Phe Leu Ser 65 70 75

Ala Gly Val Lys Gln Ser Asp Leu Pro Arg Lys Glu Thr Glu Gln
80 85 90

Pro Pro Ala Pro Gly Ser Met Glu Glu Ser Val Arg Gly Tyr Asp 95 100 105

Trp Ser Pro Arg Asp Ala Arg Arg Ser Pro Asp Gln Gly Arg Gln
110 115 120

Gln Ala Glu Arg Arg Ser Val Leu Arg Gly Phe Cys Ala Asn Ser 125 130 135

Ser Leu Ala Phe Pro Thr Lys Glu Arg Ala Phe Asp Asp Ile Pro 140 145 150

Asn Ser Glu Leu Ser His Leu Ile Val Asp Asp Arg His Gly Ala 155 160 165

Ile Tyr Cys Tyr Val Pro Lys Val Ala Cys Thr Asn Trp Lys Arg 170 175 180

Val Met Ile Val Leu Ser Gly Ser Leu Leu His Arg Gly Ala Pro 185 190 195

Tyr Arg Asp Pro Leu Arg Ile Pro Arg Glu His Val His Asn Ala 200 205 210

Ser Ala His Leu Thr Phe Asn Lys Phe Trp Arg Arg Tyr Gly Lys 215 220 225

Leu Ser Arg His Leu Met Lys Val Lys Leu Lys Lys Tyr Thr Lys 230 235 240

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Phe Leu Phe Val Arg Asp Pro Phe Val Arg Leu Ile Ser Ala Phe
                245
                                     250
Arg Ser Lys Phe Glu Leu Glu Asn Glu Glu Phe Tyr Arg Lys Phe
Ala Val Pro Met Leu Arg Leu Tyr Ala Asn His Thr Ser Leu Pro
                275
Ala Ser Ala Arg Glu Ala Phe Arg Ala Gly Leu Lys Val Ser Phe
                                                         300
Ala Asn Phe Ile Gln Tyr Leu Leu Asp Pro His Thr Glu Lys Leu
Ala Pro Phe Asn Glu His Trp Arg Gln Val Tyr Arg Leu Cys His
                320
                                                         330
Pro Cys Gln Ile Asp Tyr Asp Phe Val Gly Lys Leu Glu Thr Leu
                335
                                     340
Asp Glu Asp Ala Ala Gln Leu Leu Gln Leu Leu Gln Val Asp Arg
                350
                                     355
                                                         360
Gln Leu Arg Phe Pro Pro Ser Tyr Arg Asn Arg Thr Ala Ser Ser
                365
                                     370
Trp Glu Glu Asp Trp Phe Ala Lys Ile Pro Leu Ala Trp Arg Gln
                380
                                                         390
Gln Leu Tyr Lys Leu Tyr Glu Ala Asp Phe Val Leu Phe Gly Tyr
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                                     400
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Pro Lys Pro Glu Asn Leu Leu Arg Asp 410

<210> 467

<211> 1071

<212> DNA

<213> Homo sapiens

<400> 467

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ctgaggagac ctctgcccag ggattccgcc agctgctgga gctgaaccta 450 ctggggacgt acaccttgac caagctcgcc ctcccctacc tgcggaagag 500 tcaagggaat gtcatcaaca tctccagcct ggtggggca atcggccagg 550 cccaggcagt tccctatgtg gccaccaagg gggcagtaac agccatgacc 600 aaagctttgg ccctggatga aagtccatat ggtgtccgag tcaactgtat 650 ctcccagga aacatctgga ccccgctgtg ggaggagctg gcagccttaa 700 tgccagaccc tagggccaca atccgagagg gcatgctggc ccagccactg 750 ggccgcatgg gccagcccgc tgaggtcgg gctgcgag tgttcctggc 800 ctccgaagcc aacttctgca cgggcattga actgctcgtg acggggggtg 850 cagagctggg gtacgggtg aaggccagtc ggagcaccc cgtggacgcc 900 ccccgatatcc cttcctgatt tctctcattt ctacttggg ccccctacct 950 aggactctcc caccccaaac tccaacctgt atcaggtcac ctgcaggttc 1000 ccttagactc taagcccagt tagcaaggtg ccgggtcacc ctgcaggttc 1050 ccataaaaac gatttgcagc c 1071

<210> 468

<211> 270

<212> PRT

<213> Homo sapiens

<400> 468

Met Ala Thr Gly Thr Arg Tyr Ala Gly Lys Val Val Val Thr 1 5 10 15

Gly Gly Gly Arg Gly Ile Gly Ala Gly Ile Val Arg Ala Phe Val 20 25 30

Asn Ser Gly Ala Arg Val Val Ile Cys Asp Lys Asp Glu Ser Gly 35 40

Gly Arg Ala Leu Glu Gln Glu Leu Pro Gly Ala Val Phe Ile Leu 50 55 60

Cys Asp Val Thr Gln Glu Asp Asp Val Lys Thr Leu Val Ser Glu 65 70 75

Thr Ile Arg Arg Phe Gly Arg Leu Asp Cys Val Val Asn Asn Ala 80 85 90

Gly His His Pro Pro Pro Gln Arg Pro Glu Glu Thr Ser Ala Gln
95 100 105

Gly Phe Arg Gln Leu Leu Glu Leu Asn Leu Leu Gly Thr Tyr Thr 110 115 120 Leu Thr Lys Leu Ala Leu Pro Tyr Leu Arg Lys Ser Gln Gly Asn 125 Val Ile Asn Ile Ser Ser Leu Val Gly Ala Ile Gly Gln Ala Gln Ala Val Pro Tyr Val Ala Thr Lys Gly Ala Val Thr Ala Met Thr 155 Lys Ala Leu Ala Leu Asp Glu Ser Pro Tyr Gly Val Arg Val Asn 170 Cys Ile Ser Pro Gly Asn Ile Trp Thr Pro Leu Trp Glu Glu Leu 185 190 Ala Ala Leu Met Pro Asp Pro Arg Ala Thr Ile Arg Glu Gly Met 200 205 210 Leu Ala Gln Pro Leu Gly Arg Met Gly Gln Pro Ala Glu Val Gly Ala Ala Ala Val Phe Leu Ala Ser Glu Ala Asn Phe Cys Thr Gly 230 Ile Glu Leu Leu Val Thr Gly Gly Ala Glu Leu Gly Tyr Gly Cys Lys Ala Ser Arg Ser Thr Pro Val Asp Ala Pro Asp Ile Pro Ser

<210> 469

<211> 687

<212> DNA

<213> Homo sapiens

<400> 469

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270

gaccateget gtgggetgea cetgeatett etgaateace tggeceagaa 600 geeaggeeag cageeegaga ceateeteet tgeacetttg tgeeaagaaa 650 ggeetatgaa aagtaaacae tgaettttga aageaag 687

<210> 470

<211> 180

<212> PRT

<213> Homo sapiens

<400> 470

Met Asp Trp Pro His Asn Leu Leu Phe Leu Leu Thr Ile Ser Ile
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Phe Leu Gly Leu Gly Gln Pro Arg Ser Pro Lys Ser Lys Arg Lys 20 25 30

Gly Gln Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val 35 40 45

Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu 50 55 60

Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn 65 70 75

Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu 80 85 90

Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile 95 100 105

Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg 110 115 120

Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp 125 130 135

Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg 140 145 150

Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr Gly Pro Cys Arg Gln 155 160 165

Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys Thr Cys Ile Phe 170 175 180

<210> 471

<211> 2368

<212> DNA

<213> Homo sapiens

<400> 471

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ctccccgccg agaagcctcg ctcggcgccc aacatggcgg gtgggcgctg 150 cggcccgcag ctaacggcgc tcctggccgc ctggatcgcg gctgtggcgg 200 cgacggcagg ccccgaggag gccgcgctgc cgccggagca gagccgggtc 250 cagcccatga ccgcctccaa ctggacgctg gtgatggagg gcgagtggat 300 gctgaaattt tacgccccat ggtgtccatc ctgccagcag actgattcag 350 aatgggaggc ttttgcaaag aatggtgaaa tacttcagat cagtgtgggg 400 aaggtagatg tcattcaaga accaggtttg agtggccgct tctttgtcac 450 cactetecea geattttte atgeaaagga tgggatatte egeegttate 500 gtggcccagg aatcttcgaa gacctgcaga attatatctt agagaagaaa 550 tggcaatcag tcgagcctct gactggctgg aaatccccag cttctctaac 600 gatgtctgga atggctggtc tttttagcat ctctggcaag atatggcatc 650 ttcacaacta tttcacagtg actcttggaa ttcctgcttg gtgttcttat 700 gtgtttttcg tcatagccac cttggttttt ggccttttta tgggtctggt 750 cttggtggta atatcagaat gtttctatgt gccacttcca aggcatttat 800 ctgagcgttc tgagcagaat cggagatcag aggaggctca tagagctgaa 850 cagttgcagg atgcggagga ggaaaaagat gattcaaatg aagaagaaaa 900 caaagacagc cttgtagatg atgaagaaga gaaagaagat cttggcgatg 950 aggatgaagc agaggaagaa gaggaggagg acaacttggc tgctggtgtg 1000 gatgaggaga gaagtgaggc caatgatcag gggcccccag gagaggacgg 1050 tgtgacccgg gaggaagtag agcctgagga ggctgaagaa ggcatctctg 1100 agcaaccctg cccagctgac acagaggtgg tggaagactc cttgaggcag 1150 cgtaaaagtc agcatgctga caagggactg tagatttaat gatgcgtttt 1200 caagaataca caccaaaaca atatqtcaqc ttccctttgg cctgcagttt 1250 gtaccaaatc cttaattttt cctgaatgag caagcttctc ttaaaagatg 1300 ctctctagtc atttggtctc atggcagtaa gcctcatgta tactaaggag 1350 agtcttccag gtgtgacaat caggatatag aaaaacaaac gtagtgttgg 1400 gatctgtttg gagactggga tgggaacaag ttcatttact taggggtcag 1450 agagtetega ceagaggagg ceatteceag teetaateag cacetteeag 1500 agacaaggct gcaggccctg tgaaatgaaa gccaagcagg agccttggct 1550

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<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

<400> 472

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Asn Trp Thr Leu Val Met Glu Gly Glu Trp Met Leu Lys Phe Tyr 50 55 60

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Ala Phe Ala Lys Asn Gly Glu Ile Leu Gln Ile Ser Val Gly Lys 80 85 90

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<213> Homo sapiens

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Ile Ala Val Ile Leu Gly Ile Leu Cys Leu Val Ile Leu Val Ile 50 55 60

Ala Val Val Leu Gly Thr Met Gly Val Leu Ser Ser Pro Cys Pro 65 70 75

Pro Asn Trp Ile Ile Tyr Glu Lys Ser Cys Tyr Leu Phe Ser Met 80 85 90

Ser Leu Asn Ser Trp Asp Gly Ser Lys Arg Gln Cys Trp Gln Leu 95 100 105

Gly Ser Asn Leu Leu Lys Ile Asp Ser Ser Asn Glu Leu Gly Phe 110 115 120

Ile Val Lys Gln Val Ser Ser Gln Pro Asp Asn Ser Phe Trp Ile 125 130 135

Gly Leu Ser Arg Pro Gln Thr Glu Val Pro Trp Leu Trp Glu Asp 140 145 150

Gly Ser Thr Phe Ser Ser Asn Leu Phe Gln Ile Arg Thr Thr Ala 155 160 165

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Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His 65 70 75

Pro Ala Ser Arg Ser Phe Pro Asp Pro Arg Gly Leu Tyr His Phe Cys Leu Tyr Trp Asn Arg His Ala Gly Arg Leu His Leu Leu Tyr Gly Lys Arq Asp Phe Leu Leu Ser Asp Lys Ala Ser Ser Leu Leu Cys Phe Gln His Gln Glu Glu Ser Leu Ala Gln Gly Pro Pro Leu 125 Leu Ala Thr Ser Val Thr Ser Trp Trp Ser Pro Gln Asn Ile Ser 140 145 Leu Pro Ser Ala Ala Ser Phe Thr Phe Ser Phe His Ser Pro Pro 155 160 165 His Thr Ala Ala His Asn Ala Ser Val Asp Met Cys Glu Leu Lys 170 175 Arg Asp Leu Gln Leu Leu Ser Gln Phe Leu Lys His Pro Gln Lys 185 190 Ala Ser Arg Arg Pro Ser Ala Ala Pro Ala Ser Gln Gln Leu Gln 200 Ser Leu Glu Ser Lys Leu Thr Ser Val Arg Phe Met Gly Asp Met 215 Val Ser Phe Glu Glu Asp Arg Ile Asn Ala Thr Val Trp Lys Leu 230 235 Gln Pro Thr Ala Gly Leu Gln Asp Leu His Ile His Ser Arg Gln 245 250 255 Glu Glu Glu Gln Ser Glu Ile Met Glu Tyr Ser Val Leu Leu Pro Arg Thr Leu Phe Gln Arg Thr Lys Gly Arg Ser Gly Glu Ala Glu 275 280 285 Lys Arg Leu Leu Val Asp Phe Ser Ser Gln Ala Leu Phe Gln Asp Lys Asn Ser Ser Gln Val Leu Gly Glu Lys Val Leu Gly Ile 305 315 Val Val Gln Asn Thr Lys Val Ala Asn Leu Thr Glu Pro Val Val Leu Thr Phe Gln His Gln Leu Gln Pro Lys Asn Val Thr Leu Gln 335 345 Cys Val Phe Trp Val Glu Asp Pro Thr Leu Ser Ser Pro Gly His Trp Ser Ser Ala Gly Cys Glu Thr Val Arg Arg Glu Thr Gln Thr

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- His Glu Arg Ile Ile Thr Val Ser Thr Asn Gly Ser Ile His Ser
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- Pro Arg Phe Pro His Thr Tyr Pro Arg Asn Thr Val Leu Val Trp 65 70 75
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Ile Ala Glu Cys Ser Asn Arg Arg Leu Gln Glu Val Pro Gln Thr

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Thr	His	: Ile	. Thr	Asn 80		Ser	Phe	Gln	Gly 85		Glr	n Asr	Let	Thr 90
Lys	Ile	asn	Leu	Asn 95	His	Asn	Pro	Asn	Val 100	Gln	His	Gln	Asn	Gly 105
Asn	Pro	Gly	' Ile	Gln 110	Ser	Asn	Gly	Leu	Asn 115	Ile	Thr	: Asp	Gly	Ala 120
Phe	Leu	Asn	Leu	Lys 125	Asn	Leu	Arg	Glu	Leu 130	Leu	Leu	ı Glu	Asp	Asn 135
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Cys	Tyr	Phe	Asn	Lys 185	Val	Cys	Glu	Lys	Thr 190	Asn	Ile	Glu	Asp	Gly 195
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Lys	Leu	Phe	Leu	Ser 230	Asn	Thr	Gln	Ile	Lys 235	Tyr	Ile	Ser	Glu	Glu 240
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His	Asn	Arg	Ile	Ser 725	His	Leu	Pro	Ser	Gly 730	Phe	Leu	Ser	Glu	Val 735
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<213> Homo sapiens

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Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln
Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly
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Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala
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Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu
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<211> 1700

<212> DNA

<213> Homo sapiens

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- <212> PRT
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- Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
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- Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg 65 70 75
- Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro 80 85 90
- Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala 95 100 105
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- Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln
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- Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu
- Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly 170 175 180
- Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala 185 190 195
- Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu 200 205 210

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Lys Asp Ser

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Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg
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Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg
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Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro 80 85 90

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Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro 110 115 120

Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln 125 130 135

Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln

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Glu	Glu	Lys	Leu	Gln 215	Leu	Val	Leu	Ala	Pro 220	Leu	His	Ser	Leu	Ala 225
Ser	Gln	Ala	Leu	Glu 230	His	Gly	Leu	Pro	Asp 235	Pro	Gly	Ser	Leu	Leu 240
Val	His	Ser	Phe	Gln 245	Gln	Leu	Gly	Arg	Ile 250	Asp	Ser	Leu	Ser	Glu 255
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- Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile 35 40 45
- Leu Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu
 50 55 60
- Ala Val Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu 65 70 75
- Phe Leu Phe Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp 80 85 90
- Pro Gly Val Ile Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile 95 100 105
- Glu Met Glu Ile Glu Ala Thr Asn Gly Ala Val Pro Gln Gly Gln
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- Arg Pro Pro Pro Arg Ile Lys Asn Phe Gln Ile Asn Asn Gln Ile 125 130 135
- Val Lys Leu Lys Tyr Cys Tyr Thr Cys Lys Ile Phe Arg Pro Pro 140 145 150
- Arg Ala Ser His Cys Ser Ile Cys Asp Asn Cys Val Glu Arg Phe 155 160 165
- Asp His His Cys Pro Trp Val Gly Asn Cys Val Gly Lys Arg Asn 170 175 180
- Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser Leu Ser Leu Leu Thr 185 190 195
- Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val Ala Leu Lys Ser 200 205 210
- Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr Pro Gly Thr 215 220 225
- Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser Val Val

230 235 240

Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln Thr 245 250 255

Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val 260 265 270

Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu 275 280 285

Val Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Gly
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Ile Leu Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln 305 310 315

Glu Thr Ser Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu 320 325 330

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Glu Ala Glu Lys

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<213> Homo sapiens

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<223> unknown base

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<212> PRT

<213> Homo sapiens

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Thr Val Arg Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp 50 55 60

Asn Arg Val Thr Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu 65 70 75

Tyr Ala Gly Asn Asp Lys Trp Cys Leu Asp Pro Arg Val Val Leu 80 85 90

Leu Ser Asn Thr Gln Thr Gln Tyr Ser Ile Glu Ile Gln Asn Val 95 100

Asp Val Tyr Asp Glu Gly Pro Tyr Thr Cys Ser Val Gln Thr Asp 110 115 120

Asn His Pro Lys Thr Ser Arg Val His Leu Ile Val Gln Val Ser 125 130 135

Pro Lys Ile Val Glu Ile Ser Ser Asp Ile Ser Ile Asn Glu Gly
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Asn Asn Ile Ser Leu Thr Cys Ile Ala Thr Gly Arg Pro Glu Pro 155 160 165

Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala Val Gly Phe Val 170 175 180

Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr Arg Glu Gln 185 190 195

Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala Ala Pro 200 205 210

Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr Ile 215 220 225

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<212> PRT

<213> Homo Sapien

<400> 612

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Met Met Val Arg Lys Gly Asp Thr Ala Val Leu Arg Cys Tyr Leu 50 55 60

Glu Asp Gly Ala Ser Lys Gly Ala Trp Leu Asn Arg Ser Ser Ile
65 70 75

Ile Phe Ala Gly Gly Asp Lys Trp Ser Val Asp Pro Arg Val Ser 80 85 90

Ile Ser Thr Leu Asn Lys Arg Asp Tyr Ser Leu Gln Ile Gln Asn 95 100 105

Val Asp Val Thr Asp Asp Gly Pro Tyr Thr Cys Ser Val Gln Thr 110 115 120

Gln His Thr Pro Arg Thr Met Gln Val His Leu Thr Val Gln Val 125 130 135

Pro Pro Lys Ile Tyr Asp Ile Ser Asn Asp Met Thr Val Asn Glu
140 145

Gly Thr Asn Val Thr Leu Thr Cys Leu Ala Thr Gly Lys Pro Glu 155 160 165

Pro Ser Ile Ser Trp Arg His Ile Ser Pro Ser Ala Lys Pro Phe 170 175 180

Glu Asn Gly Gln Tyr Leu Asp Ile Tyr Gly Ile Thr Arg Asp Gln 185 190 195

Ala Gly Glu Tyr Glu Cys Ser Ala Glu Asn Ala Val Ser Phe Pro 200 205 210

Asp Val Arg Lys Val Lys Val Val Val Asn Phe Ala Pro Thr Ile 215 220 225

Gln Glu Ile Lys Ser Gly Thr Val Thr Pro Gly Arg Ser Gly Leu

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Tyr Lys Gly Glu	Lys Lys 260	Leu Phe	Asn Gly 265	Gln Gln	Gly Ile	Ile 270				
Ile Gln Asn Phe	Ser Thr 275	Arg Ser	Ile Leu 280	Thr Val	Thr Asn	Val 285				
Thr Gln Glu His	Phe Gly 290	Asn Tyr	Thr Cys 295	Val Ala	Ala Asn	Lys 300				
Leu Gly Thr Thr	Asn Ala 305	Ser Leu	Pro Leu 310	Asn Pro	Pro Ser	Thr 315				
Ala Gln Tyr Gly	Ile Thr 320	Gly Ser	Ala Asp 325	Val Leu	Phe Ser	Cys 330				
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<211> 520

<212> PRT

<213> Homo Sapien

<400> 614

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Leu	Ala	Val	Val	Val 50	Ile	Tyr	Leu	Ile	Leu 55	Leu	Thr	Ala	Gly	Ala 60
Gly	Leu	Leu	Val	Val 65	Gln	Val	Leu	Asn	Leu 70	Gln	Ala	Arg	Leu	Arg 75
Val	Leu	Glu	Met	Tyr 80	Phe	Leu	Asn	Asp	Thr 85	Leu	Ala	Ala	Glu	Asp 90
Ser	Pro	Ser	Phe	Ser 95	Leu	Leu	Gln	Ser	Ala 100	His	Pro	Gly	Glu	His 105
Leu	Ala	Gln	Gly	Ala 110	Ser	Arg	Leu	Gln	Val 115	Leu	Gln	Ala	Gln	Leu 120
Thr	Trp	Val	Arg	Val 125	Ser	His	Glu	His	Leu 130	Leu	Gln	Arg	Val	Asp 135
Asn	Phe	Thr	Gln	Asn 140	Pro	Gly	Met	Phe	Arg 145	Ile	Lys	Gly	Glu	Gln 150
Gly	Ala	Pro	Gly	Leu 155	Gln	Gly	His	Lys	Gly 160	Ala	Met	Gly	Met	Pro 165
Gly	Ala	Pro	Gly	Pro 170	Pro	Gly	Pro	Pro	Ala 175	Glu	Lys	Gly	Ala	Lys 180
Gly	Ala	Met	Gly	Arg 185	Asp	Gly	Ala	Thr	Gly 190	Pro	Ser	Gly	Pro	Gln 195
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Gly	Gln	Pro	Gly	Leu 305	Gln	Gly	Val	Pro	Gly 310	Pro	Pro	Gly	Ala	Val 315
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Gly Leu Lys	Gly Ser 350	Lys Gly	/ Asp	Thr	Gly 355	Leu	Gln	Gly	Gln	Gln 360
Gly Arg Lys	Gly Glu 365	Ser Gly	v Val	Pro	Gly 370	Pro	Ala	Gly	Val	Lys 375
Gly Glu Gln	Gly Ser 380	Pro Gly	/ Leu	Ala	Gly 385	Pro	Lys	Gly	Ala	Pro 390
Gly Gln Ala	Gly Gln 395	Lys Gly	/ Asp	Gln	Gly 400	Val	Lys	Gly	Ser	Ser 405
Gly Glu Gln	Gly Val 410	Lys Gly	/ Glu	Lys	Gly 415	Glu	Arg	Gly	Glu	Asn 420
Ser Val Ser	Val Arg 425	Ile Val	. Gly	Ser	Ser 430	Asn	Arg	Gly	Arg	Ala 435
Glu Val Tyr	Tyr Ser 440	Gly Thi	Trp	Gly	Thr 445	Ile	Cys	Asp	Asp	Glu 450
Trp Gln Asn	Ser Asp 455	Ala Ile	e Val	Phe	Cys 460	Arg	Met	Leu	Gly	Tyr 465
Ser Lys Gly	Arg Ala 470	Leu Tyı	: Lys	Val	Gly 475	Ala	Gly	Thr	Gly	Gln 480
Ile Trp Leu	Asp Asn 485	Val Glr	Cys	Arg	Gly 490	Thr	Glu	Ser	Thr	Leu 495
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<212> DNA

<213> Homo Sapien

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<211> 98

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<213> Homo Sapien

<400> 616

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Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val 35 40 45

Ala Asp Leu Thr Gln Ile Asp Val Asn Val Gln Asp His Phe Trp 50 55 60

Asp Gly Lys Gly Cys Glu Met Ile Cys Tyr Cys Asn Phe Ser Glu 657075

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Phe Val Ile Pro Cys Asn Asn Gln 95

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<212> DNA

<213> Homo Sapien

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Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala

Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His 65 70 75

Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe 80 85 90

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Pro Gln	Gly	Met	Pro 170	Glu	Gly	Asp	Leu	Val 175	Tyr	Val	Asn	Tyr	Ala 180
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Lys	Lys	Glu	Gly	Trp 410	Arg	Pro	Arg	Arg	Thr 415	Ile	Leu	Phe	Ala	Ser 420
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Phe	Ser	Glu	Arg	Leu 650	Gln	Asp	Phe	Asp	Lys 655	Ser	Asn	Pro	Ile	Val 660
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